

CURRICULUM VITAE

CHRISTOPHER D. GEDDES, Ph.D., BSc., CChem., CSci., CPhys, FInstP., FRSC.

Education

Ph.D. 1996 University of Wales, Swansea, UK. (Physical Chemistry).
BSc. 1992 Lancaster University, England, UK. (Chemistry).

Experience in Higher Education

4-25-2010 – Present UMBC, Director and Founder: The Institute of Fluorescence, IoF.
4-25-2010 – Present UMBC, Professor of Chemistry and BioChemistry
3-1-2009 – 2012 NIH MARCE Diagnostics – Co Sheppard.
2009 – 6-30-2010 UMBI, Center of Marine Biotechnology, Professor, Adjunct.
2001 – 6-30-2010 UMBI, Director and Founder: The Institute of Fluorescence, IoF.
2004 – 2007 NIH P41 "Center for Fluorescence Spectroscopy, Associate Director.
2005 – 2010 University of Maryland Biotechnology Institute, UMBI, Professor.
May 2003 – May 2009 University of Maryland School of Medicine, Professor, Adjunct.
2003 – 2005 University of Maryland Biotechnology Institute, Associate Professor.
2001-2003 University of Maryland Biotechnology Institute, Assistant Professor.
1997-2001 University of Strathclyde, Glasgow, Scotland, UK, Postdoctoral Fellow.

Honors Received & Professional Qualifications

4-30-2019 - Honoured by Maryland House of Delegates in Annapolis in a citation, for outstanding contributions to minority and women education and for mentoring the next generation of scientists.
10-15-2015 – Daily Record *Innovator of the Year*
12-3-2015 - Professor Geddes awarded for technology innovation at UMBC's innovators luncheon by the USM chancellor, Dr Bob Caret.
2013 – Fellow of the Royal Society of Chemistry, FRSC.
10-2-2013 – Daily Record *Innovator of the Year*
2012 - Fellow of the Institute of Physics (FInstP., CPhys), Chartered Physicist.
3-16-2011 - Honoured by Maryland House of Delegates in Annapolis, House Resolution #326, for outstanding contributions to education, biotechnology and innovation.
2001 – 2011 - Permanent Member of the NIH, National Institutes of Health.
10-21-2010 – Daily Record *Innovator of the Year*
10-15-2008 – Daily Record *Innovator of the Year*
2003 - Member of the American Diabetes Association.
2001 - Member of the American Chemical Society (ACS).
2001 - Member of the Biophysical Society, and Biophysical Society Fluorescence subgroup.
2001 - Member of the Society of Fluorescence (MSoF).
2001 – Present Executive Director: The Society of Fluorescence.
2001 - Member of SPIE.
1997 - Member Royal Society of Chemistry (MRSC, CChem, CSci), Chartered Chemist and Scientist.

Peer Review

2024 - Present	Founding Editor-in-Chief: <i>Advanced Metamaterials</i> (Springer/Nature)
2024 – Present	Founding Editor: <i>Molecular Biophysics</i> book series (Springer/Nature)
2013 – 2024	Editorial Board Member: <i>Journal of Photochemistry</i>
2011 – 2024	Editorial Board Member: <i>Recent Patents in Materials Science</i>
2008 – Present	Bio-X International Conference Series, Co-Chair, International Steer Committee.
2005 – Present	Founding Editor-in-chief: <i>Plasmonics Journal</i> (Springer/Nature)
2005 – 2024	Founding Editor and Editor: <i>Reviews in Plasmonics</i> (Springer/Nature)
2003 – 2009	International Advisory Board for "Springer", now Springer/Nature publishers.
2002 – 2024	Founding Editor and Editor: <i>Reviews in Fluorescence</i> (Springer/Nature)
2001 – Present	Editor-in-chief: <i>The Journal of Fluorescence</i> (Springer/Nature)
2001 - 2023	Editorial Board Member: <i>Dyes and Pigments</i> (Elsevier)
2001 – 2024	Co-Editor: <i>The Topics in Fluorescence Spectroscopy Series</i> (Springer/Nature)
2001 – 2009	The Who's Who in Fluorescence Annual Volume (Springer/Nature)
2001 – Present	Reviewer: The National Institutes of Health and National Science Foundation
2001 – 2011	NIH Study Section Chair and Permanent Member of EBIT Study Section

Pending Research Support

1-11-2025 – 10-30-2028	\$200,000, US Army, DoD, Geddes (PI) Fluorophore Induced Plasmonic Current
1-1-2026 – 12-31-2027	\$20,000, UMBC Catalyst Fund, Geddes (PI) Corrugated Surfaces for Fluorophore Induced Plasmonic Current

Funded Research Support

6-1-2024 – 3-30-2025	\$4000, University of Penn CoOp agreement, Geddes (PI) Mixed-Metal Nanofabricated Substrates for Plasmonic Current Generation
6-1-2024 – 3-1-2025	\$8000, UMBC FEAT Award, Geddes (PI) META-Surface DNA Fragmentation
7-1-2024 – 6-30-2025	\$10,000, Alex Brown Innovation Center, Geddes (PI) Mixed-Metal Nanofabricated Substrates for Broad-Wavelength Solar Energy Conversion
1-1-2022 – 1-1-2-23	\$16,500, UMBC Catalyst Fund, Geddes (PI) Plasmon to Current – A new Green Solar Energy Conversion Technology
1-1-2019 – 6-30-2019	\$18,500, UMBC Catalyst Fund, Geddes (PI) 96-Well Simultaneous Lysing
7-6-2016 – 6-30-2019	\$178,885, NIH R03AI117272, Geddes (PI)

	Microwave-Accelerated Metal Enhanced Fluorescence (MAMEF) of CT and GC
7-1-2016 – 6-30-2018	\$150,000, UMB-UMBC university grant, Geddes (PI), Stine (PI) Ultra rapid and Sensitive detection of Cholera
11-1-2016 – 7-17-2017	\$150,000, TEDCO State of MD, Geddes (PI) Lyse-It - A rapid means to lyse any bug and bacteria
4-1-2017 – 8-31-2017	\$8,500, UMBC catalyst Fund, Geddes (PI) Lyse-it for the biochemical conversion of Microalgae for Biofuels
4-6-2015 – 1-6-2016	\$100,000, TEDCO State of MD, Geddes (PI) Lyse-it - A new technology to rapidly lyse bugs and bacteria
7-1-2015 – 3-31-2016	\$21,300, UMBC catalyst Fund, Geddes (PI) Lyse-it for the biochemical conversion of Microalgae for Biofuels
7-1-2012 – 6-30-2017	\$740, 505, NIH 2 U54 EB007958-06, Gaydos (PI) / Geddes, POC for Sexually Transmitted Diseases
6-1-2012 – 5-31-2017	\$881,376, NIH R21/33 AI100168-01, Tennant (PI) / Geddes, Detection of Salmonella from blood, food and feces
4-1-2011 – 3-30-2013	\$88,025, NIH R21AI093248-02, Chaiken (PI) / Geddes, Conformational Changes in GP120
3-1-2009 – 2-28-2014	\$1, 216, 875, NIH U54 A1057168, Geddes/Levine (PI) Multiplexed Ultra Fast and Sensitive Bioagent assays
10-1-2011 – 11-10-2012	\$363, 231, Bill and Melinda Gates Foundation, Levine (PI) / Geddes Clinical detection of Salmonella using MAMEF
9-1-2011 – 12-31-2012	\$245, 687, MedImmune Inc., Geddes (PI), Ultra Fast / sensitive detection of DNA
9-1-2011 – 12-31-2012	\$169, 010, MedImmune Inc., Geddes (PI) Intrinsic Protein fluorescence / Analysis
9-1-2011 – 12-31-2012	\$215, 758, MedImmune Inc., Geddes (PI) MEF Gyros Based detection strategies
1-15-2011 – 8-15-2011	\$1,268.82, Plasmonix Inc., Geddes (PI) Fee for Service Development
1-15-2011 – 8-15-2011	\$5, 518.80, Plasmonix Inc., Geddes (PI) Fee for Service Development

1-15-2011 – 8-15-2011	\$1,484.28, Plasmonix Inc., Geddes (PI) Fee for Service Development
1-15-2011 – 8-15-2011	\$1,360.80, Plasmonix Inc., Geddes (PI) Fee for Service Development
1-15-2011 – 8-15-2011	\$2,411.64, Plasmonix Inc., Geddes (PI) Fee for Service Development
7-1-2010 – 6-30-2011	\$41,935, NIH / NIBIB Private Public Partnership, Geddes (PI) MAMEF based detection of Clinical agents / Hopkins
1-15-2011 – 6-30-2011	\$3,900, Plasmonix Inc., Geddes (PI) Fee for Service Development
7-1-2010 – 6-30-2011	\$91,066, NIH / NIBIB Private Public Partnership, Geddes (PI) MAMEF based detection of Clinical agents / Hopkins
7-1-2010 – 6-30-2011	\$112,798, NIH / NIBIB Private Public Partnership, Geddes (PI) MAMEF based detection of Clinical agents / UC Davis
7-1-2010 – 6-30-2011	\$83,893, NIH / NIBIB Private Public Partnership, Geddes (PI) MAMEF based detection of Clinical agents / Cincinnati
10-1-2009 – 9-30-2010	\$565,000, MedImmune, Geddes (PI) Protein Fluorescence and Biophysics
12-1-2009 – 4-30-2009	\$40,000, L'Oreal USA, Geddes (PI) Metal-enhanced fluorescence nanoballs
5-1-2007 – 4-30-2010	\$412, 500, NIH R21 NS055187, Geddes (PI) NINDS - Plasmonic detection of free bilirubin in neonates
10-1-2007–9-30-2010	\$1, 057, 720, Bio Rad Laboratories, Geddes (PI) Plasmonic Nanohole high-throughput immunoassays
12-1-2008 – 11-30-2009	\$58, 323, US Navy, Geddes (PI) Protective antigen detection in clinical samples
4-1-2009 – 3-30-2010	\$302, 600, 180s inc, Geddes (PI) Metal-Enhanced Fluorescence from Plastics: Textiles
7-1-2008 – 6-30-2009	\$132,000, American Heart Association, Geddes / Aslan (PI) Rapid Cardiac Risk Assessment in a Clinical Setting
7-1-2008 – 6-30-2012	\$414, 613, NIH / NIBIB, Geddes / Aslan (PI) K25 Mentored Career Development Award

8-1-2008 – 7-31-2009	\$123,606, NIH / NIBIB U54, Gaydos / Geddes (PI) POC testing of STD's
9-1-2008 – 8-31-2009	\$120,000, L'Oreal USA, Geddes (PI) Metal-Enhanced Optical Properties of Chromophores
8-1-2008 – 7-31-2009	\$156,141, MedImmune, Geddes (PI) Ultra-fast DNA Immunoassays
7-1-2007 – 6-30-2008	\$70,000, IoF / MBC / UMBI IDCR, Geddes (PI)
12-1-2007	\$20,122, NIH R21INS055187 – Supplemental, Geddes (PI) Equipment (laser sources)
11-1-2007 – 10-31-2008	\$10,000, UMBI Intercenter grants, Geddes (PI) Avian Bird Flu detection in under 1 minute
1-1-2008 – 5-1-2008	\$16,250, NIH / NIAID U54 A1057168 - supp, Geddes (PI) Foreign Graduate Studentship (Israel)
4-14-2008 – 5-15-2008	\$10,000, L'Oreal USA, Geddes (PI) Analysis of Luminophores
10-31-2007	\$65,175, NIH NIAID – Equipment, Geddes (PI) Thermal Imaging Camera
3-1-2007-2-28-2008	\$315,000, NIH U54 A1057168, Geddes/Levine (PI) A silver-enhanced rapid strip test for the sensitive detection of ricin toxin
3-1-2006 – 2-28-2008	\$300,000, NIH U54 A1057168, Geddes / Levine (PI) Anthrax Detection in clinical samples in 30 seconds
4-1-2008 – 8-1-2008	\$15,000, UMBI Office of Research and Development, Geddes (PI) Proof-of-Concept Angular-Ratiometric Scattering Assays for Bioagents
3-1-2008 – 2-28-2009	\$150,000, U54 A1057168, Geddes/Levine (PI) MARCE – Anthrax Detection in Clinical Samples
1-1-2007 – 2-31-2007	\$65,000, Support from UMB CFS, Geddes (PI)
4-1-2006 – 3-31-2007	\$50,000, US Navy, Geddes (PI) Enhanced Anthrax detection
12-23-2005 – 12-22-06	\$300,000, GlaxoSmithKline (GSK), Geddes (PI) Fluorescence-based Drug Screening and photophysical Pathways
7-1-2006 – 6-30-2007	\$70,000, IoF Support / MBC / UMBI IDCR, Geddes (PI)

9-1-2005 – 8-31-2006	\$264, 617, Seahorse BioScience, Boston, MA., Geddes (PI) Fluorescent Sensor Development and Screening Program
4-1-2006 – 3-31-2007	\$68, 709, NIH / NCRR RR08119, Geddes / Lakowicz (PI) Associate Director NIH P41 CFS
1-1-2006 – 12-31-2006	\$35,000, UMBI / MBC support for BSL 3 work, Baillie / Geddes (PI) Anthrax detection in Clinical Samples and infected soil
8-1-2004 – 7-31-2006	\$412,500, NIH R21 GM070929, Geddes (PI) NIH/NIGMS - Metal-Enhanced Fluorescence RNA Sensing
7-1-2005 – 6-30-2006	\$65,000, IoF / MBC / UMBI IDCR, Geddes (PI)
11-1-2001-12-31-2006	\$325,000, UMB / CFS Start-up support, Geddes (PI)
9-1-2003 – 8-31-2006	\$396, 788, EB00682-02, Geddes / Lakowicz (PI) NIH/NIBIB - Metal-Enhanced Fluorescence Sensing
9-1-2004 – 8-31-2005	\$148, 500, Seahorse BioScience, Boston, MA., Geddes (PI) Fluorescent Sensor Development and Screening Program
9-1-2004 – 8-31-2005	\$29, 700, Seahorse BioScience – Supplemental, Geddes (PI) Fluorescent Sensor Development and Screening Program
1-1-2003 – 5-1-2004	\$150, 000, NIH/NCI R43-CA97569-01, Geddes / Szmazinski (PI) Metallic nano-sensor matrix with enhanced fluorescence
11-1-2001 – 6-30-2005	\$240, 000, IoF Support / MBC / UMBI IDCR, Geddes (PI)
1-1-2003 – 6-30-2003	\$300, 000, CIBA Vision, Novartis, Atlanta, USA., Geddes (PI) Advanced Glucose Sensing in a contact lens

Fund Raising - Received

2019 - \$13,400 (Lyse-It) – Cash Gift to the IoF

2018 - \$46,000 (Lyse-It) – Cash Gift to the IoF

2017 - \$24,500 (Lyse-It) – Cash Gift to the IoF

2012 - \$44,500 (Agilent) – Cash Gift to the IoF

2011 - \$45,000 (Agilent) – Cash Gift to the IoF

2010 - \$75,000 (Medimmune) – DNA separation system, “MagnaPure”

2009 - \$10,000 (HORIBA- Jobin Yvon) – TemPro Fluorescence Lifetime System

2008 - \$180,000 (ISS Inc, Illinois) - Fluorescence Correlation Spectroscopy Microscope

2008 - \$5,300 (Department of Energy) – Oscilloscopes

2008 - \$50, 000 (Department of Energy) – Analytical balances

2008 - \$53,000 (HORIBA- Jobin Yvon) for a Multi frequency fluorometer

Recent Grants / Awards Submitted – Not Funded (not exhaustive list)

2024 – 2025	\$1,100,000, Keck Foundation, Geddes (PI) Uniquely Broad Wavelength, Very High Efficiency Solar Harvesting Plasmonic Metamaterials
2024 – 2025	\$1,250,000, Federal Earmark, Geddes (Co-I) Artificial Intelligence and Machine Learning Algorithms to Generate and Optimize New Materials for Highly Efficient Solar Energy Conversion
2023-2024	\$1,000,000, Federal Earmark, Geddes (PI) Swimming pool water environmental sustainability program
2023-2024	\$1,250,000, Federal Earmark, Geddes (Co-I) Designing a device that uses microwaves to kill wood eating insects within wood
2023	\$2,500, UMBC Catalyst Fund Supplemental, Geddes (PI) Plasmon to Current – A new Green Solar Energy Conversion Technology
2021 - 2023	\$6,000,000, Federal Earmark, Geddes (PI). Innovations in Environmental Sustainability and Sustainable Agriculture
2020 - 2023 (3 years)	300,000 Euro's, NATO, Geddes (PI) Biological pathogens monitoring using a geographic-based multiplex test kit
11-1-2020 – 10-31-24	\$3,500,000 NIH NIAID R01, Geddes (PI) High-Throughput COVID-19 Screening
10-1-2020 – 11-30-23	\$3,200,000 DoD, Geddes (PI) Novel Innovative Detection for SARS CoV-2 Detection
9-1-2020 – 2-28-2021	\$100,000 Fast Grants, Geddes (PI) Massively High-Throughput COVID-19 Screening
11-1-2019 – 10-31-22	\$518, 853 NIH R01, Geddes (PI)

A plasmonics-enhanced non-invasive exhaled breath aerosol measurement tool for biomolecule concentration in the distal airways

7-1-2020 – 6-30-2023	\$1,520,000 NIH R01, Geddes (PI) Plasmonic Current
9-1-2018 – 2-28-2019	\$120,793 NIH R43, Lyse-It (PI) 30 Second Lysing, DNA fragmentation and safe shipping
9-1-2018 – 8-31-2022	\$289,824 NIH R01, Geddes (PI) Multiplexed Test for Clostridium Difficile DNA and Toxin
7-1-2018 – 6-30-2022	\$480,580 NIH R01, Stine (PI) Multiplex Rapid Microwave Test for Diarrheal Pathogens
1-1-2018 – 12-31-2018	\$1,100,000 Keck Foundation, Geddes (PI) Plasmonic Current – A New Paradigm in Light Detection
4-1-2018 – 3-31-2022	\$1,494,600 NIH R01GM120394-01A1, Geddes (PI) Microwave Focused Lysing – Revised
9-1-2017 – 8-31-2019	\$400,134 NIH R21EB023535, Geddes (PI) A Paradigm Shift in Fluorescence-based Sensing – Revised
7-1-2016 – 5-30-2019	\$1,110,369, NIH R01GM120394, Geddes (PI) "Microwave Focused Lysing"
9-1-2016 – 8-31-2018	\$387,058, NIH R21EB023535-01, Geddes (PI) A Paradigm Shift in Fluorescence-based Sensing
9-1-2015 – 8-31-2020	\$1,878,862, NIH R01 EB021272, Geddes (PI) Plasmonic Electricity based detection of Chlamydia

Student Grants / Awards - Funded

7-1-2024 – 6-30-2025	\$1000, Shoyab Shaik, Undergraduate Student, Using Photophysical Properties to Select Fluorophores for Plasmonic Current
7-1-2024 – 6-30-2025	\$1000, Ethan Denny, Undergraduate Student Elucidation of which ROS are Generated in Metasurface Microplates
7-1-2024 – 6-30-2025	\$1000, Ahmed Al-Anesi, Undergraduate Student Metasurface based generation of Reactive Oxygen Species
7-1-2024 – 6-30-2025	\$1000, Rebecca Schultz, Undergraduate Student

Mixed-Metal films for the purpose of tuning Fluorophore Induced Plasmonic Current

Lahari Sahah, Graduate Student, Biophysical Society, \$400, Feb 2023.

Lahari Saha, Graduate Student, \$1000, BSCP – Harvard Medical School Ed. Relief Fund, 2022

9-1-2018 – 8-31-2021 \$150,000.00, Rachael Knoblauch, Graduate Student,
NSF Graduate Student Research Fellowship

Tonya Santaus, Graduate Student, \$500 travel award to the American Society for Microbiology (ASM) Microbe meeting, Atlanta, June 7th 2018.

Tonya Santaus, Graduate Student, \$400 travel award to the Annual BioPhysical Society meeting, San Francisco, February 17-21, 2018.

Student Grants Submitted – Not Funded

7-1-2025 – 6-30-2026 \$1500, Rishi Vedantham, Undergraduate Student
Nano Burger Type Structures for Fluorophore Induced Plasmonic Current Generation

7-1-2025 – 6-30-2026 \$1500, Hillary Oparaugo, Undergraduate Student
High Surface Area Ruled gratings for Chemiluminescent Induced Plasmonic Current

Lahari Saha, Graduate Student, \$805.00, Nanomaterials Travel Grant, 2022.

Lahari Saha, Graduate Student, \$117,000, DoD National Defence and Engineering Graduate Fellowship, 2021-2024
“Plasmonic Current for Solar Energy Conversion”
Not Funded 2021

Lahari Saha, Graduate Student, \$104,000, Ford Fellowship
“Plasmonic Current for solar Energy Conversion”
Not Funded 2021

Lahari Saha, Graduate Student, \$100,000, NSF Graduate Research Fellowship
“Plasmonic Current for Solar Energy Conversion”
Not Funded 2021

Josh Moskowitz, Graduate Student, \$109,836.00. F31 NIH Proposal
“Plasmonic Electricity”
Opportunity number: PA-16-309
Not Funded 2017

Rachael Knoblauch, Graduate Student, \$109,836.00. NIH F31 Grant application

“Antibacterial Carbon Nanodots”

Opportunity number: PA-16-309

Not funded 2017

Rachael Knoblauch, Graduate Student, \$100,000.00. NSF Graduate Student Research Fellowship
Not funded 2017

Tonya Santaus, Graduate Student, \$93,273.00. NIH F31 Application

“Microwave-Assisted Cellular Lysing and DNA fragmentation of *Listeria monocytogenes* and *Vibrio cholera*”

Opportunity number: PA-16-309

Not funded 2017

Tonya Santaus, Graduate Student, \$100,000 NIH F31 Application

“Rapid Based-microwave Cellular Lysing”

Not Funded 2015

Ph.D. Students Mentored at UMBC

Zach Nichols, Ph.D. Supervisor, (Graduated in July 2025).

Daniel Pierce, Ph.D. Supervisor, (Graduated in May 2025).

Lahari Saha - Ph.D. Supervisor, (Expected to Graduate in December 2027).

Nav Phulara – Rotation Grad Student, Chemistry Dept., UMBC, Fall, 2022.

Alexander Paredes - Rotation Grad Student, Chemistry Dept., UMBC, Fall 2020.

Alex Reardon - Rotation Grad Student, Chemistry Dept., UMBC, Fall 2020.

Tobias Bentzel - Rotation Grad Student, Chemistry Dept., UMBC, Fall 2020.

Brianda Elzey, - Ph.D. Supervisor, (Dropped due to medical)

Tonya Santaus - Ph.D. Supervisor, (Graduated in May 2019)

Rachael Knoblauch - Ph.D. Supervisor, (Graduated in June 2021)

Josh Moskowitz - Ph.D. Supervisor, (Graduated in Dec 2020)

Rachel Taylor – Ph.D. Supervisor, (Graduated December 2016)

Johan Melendez – Ph.D. Supervisor, (Graduated December 2016)

Jacquelyn Audino – Ph.D. Supervisor (dropped).

Birsin Varisli - Rotation Grad student, Chemistry Dept., UMBC, Fall 2014.

Eric Languirand - Rotation Grad student, Chemistry Dept., UMBC, Fall 2012.

DeLauren McCauley - Rotation Grad student, Chemistry Dept., UMBC, Summer 2011.

Greg Winter - Rotation Grad student, Chemistry Dept., UMBC, Summer 2011.

Kim Roman - Rotation Grad student, Chemistry Dept., UMBC, Spring 2011.

Rachel Leah Skerker – Rotation Grad student, Chemistry Dept., UMBC, Fall 2009.

Ph.D. Students / Other Universities

Frans Kokojka, (Ben Gurion University, Israel), July 2025, (Committee member).

Hilla Ben Hamo. (Ben Gurion University, Israel), June – September 2014 in IoF, graduated Fall 2016.

Joshi Lovleen, (University of Wales, Cardiff, UK), May – Sept. 2011, Graduated August 2012.

Karina Golberg, (Ben Gurion University, Israel), June – Sept 2009 in IoF, graduated Fall 2011.

Amit Elbaz, (Ben Gurion University, Israel), June – September 2009 in IoF, graduated Fall 2011.
 Eltzov Evgeni (Ben Gurion, Israel), October – December 2008 in IoF, graduated Fall 2010.
 Daria Prilutsky (Ben Gurion, Israel), October – December 2008 in IoF, graduated Fall 2010.
 Rebecca Bozym, UMAB, graduated Fall 2008, (Committee member).

Masters Students Mentored at UMBC

Sheena Young, Masters Supervisor, (Graduated August 2012).

Undergraduate Student Interns Mentored in my Lab, (Not Exhaustive list)

Justin Muraya, (UMBC), February 2025 - Present
 Ethan Denny, (UMBC), March 2024 – Present
 Haneul Kim, (UMBC), Jan 2024 - Present
 Hillary Oparaugo, (UMBC), May 2025 – Present
 Max Palmer, (UMBC), April 2024 – Present
 Clifton Cunningham, (UMBC), April 2024 – July 2025.
 Sean Villaver, (UMBC), April 2024 – July 2025.
 Abdullah Bajwar, (UMBC), April 2024 – July 2025.
 Samuel Oluwarotimi, (UMBC), April 2024 – July 2025.
 Mulan Bell, (UMBC), April 2024 – July 2025.
 Maya Classon, (UMBC), February 2025 – May 2025.
 Matthew Harshaw, (UMBC), February 2025 – May 2025.
 Ahmed Al-Anesi, (UMBC), March 2024 – June 2025.
 Herbert Halaa, (UMBC), April 2024 – July 2025.
 Ofir Cohen, (UMBC), October 2024 – July 2025.
 Sarasi Gunasekara, (UMBC), October 2024 – May 2025.
 Ali Mutasim, (UMBC), November 2024 – July 2025.
 Abraham Karikkineth, (UMBC), May 2024 – August 2024
 Tareq Al-Khateeb, (UMBC), March 2024 – May 2024
 Aiden Mihalik, (UMBC), Oct 2023 - May 2024
 Jasmine Shaibani, (UMBC), Sep 2022 - May 2023
 Shoyab Shaik, (UMBC), Oct 2023 – July 2025
 Rebecca Schultz, (UMBC), Jan 2024 – July 2025
 Jiabao Liang, (UMBC), Summer 2022.
 Thomas McDavitt, (UMBC), Summer 2022.
 Michelle Zhang, (UMBC), Summer 2022 – July 2025.
 Vanshika Agarwal, (UMBC), Summer 2021 – August 2022.
 Max Bobbin, (UMBC), Summer 2021.
 Andrew Gedra, (UMBC), Summer 2021.
 Conor Housley, (UMBC), Summer 2021 – Fall 2021.
 Andrew Hurdle, (UMBC), June 2021 – August 2021.
 Benjamin Koepp, (UMBC), Summer 2021.
 Rifat Talukder, (UMBC), Summer 2021.
 Elizabeth Hawkins, (UMBC), Spring 2019 – December 2019.
 Ken Greenberg, (UMBC), Spring 2019 – December 2019.

Siya Bhagat, (UMBC), Spring 2019 – December 2019.
 Leland Reisfield, (UMBC), Spring 2019.
 Aharon Helman, (UMBC), Fall 2018, Spring 2019.
 Jason Medries, (UMBC), Spring 2019 – December 2019.
 Judy Lau, (UMBC), Summer 2019
 Phuong Vi Le, (UMBC), Summer 2019
 Rashad Sindi, (UMBC), Spring 2019 – December 2019.
 Lahari Saha, (UMBC), Summer 2018 – December 2019.
 Prabhdeep Suri, (UMBC), - Spring 2018 – Spring 2019.
 Estelle Ra, (UMBC), - April 2018 – Fall 2019.
 Fan Zhang, (UMBC), - Summer 2017 – Spring 2019
 Paula Ladd, (UMBC), - Fall 2016 - Spring 2019
 Kavneet Chahil, (UMBC), - Fall 2017 – Fall 2018
 Brian Bui, (UMBC), - April 2017 - September 2017
 Ammar Raza, (UMBC), - April 2017 - September 2017
 Amanda Harvey, (UMBC), - Summer 2016, Summer 2017 & summer 2019.
 Maki Negesse, (UMBC), - Fall 2015 - Spring 2016
 Shannon Cole, (UMBC), - Summer 2016 - Fall 2016
 Asma Husna, (UMBC), Spring 2016.
 Melissa Cyr, (UMBC), - Summer 2016 - Spring 2017
 Daniel Pierce, (UMBC), - Spring 2015 – Fall 2015
 Loran Margevich, (UMBC), - Summer 2016 - Fall 2016
 Bella Ly, (UMBC), – Spring - Fall 2016
 J. Dohl, (UMBC), - Spring - Fall 2015
 Greg Brinsley, (UMBC), – Spring 2014 – Spring 2015.
 Daniel Kiang, (UMBC), – Spring - Fall 2014.
 Ronald McNeil, (UMBC), 2012 – 2014.
 Mary McGann, (Catholic University of America, Washington DC), May – August 2012.
 Jennifer Stone, (UMBC), May – September 2012.
 Dan Hass, (UMBC), May – September 2012.
 Christopher Estab, (UMBC), May 2012 – October 2012.
 Alisha Budhathoki, (Baltimore Community College), May – October 2012.
 Benjamin Rosen, (UMBC), May – September 2012.
 Maria Vitery, (UMBC), January – August 2012.
 Kevin Lin, (UMBC), January – June 2012.
 Dagmawi Tilahun, (UMBC), June – September 2011.
 Lynda Mandeng, (Baltimore Community College), February - August 2009.
 Buddha Mali, (Baltimore Community College), February 2009 – July 2009.
 Radmila Pavlovic, (Baltimore Community College), February 2009 – July 2009.
 Pompon Mputu, (Baltimore Community College), February - August 2009.
 Jeff Roser, (Bates College, Maine), 8-1-2009 - 9-30-2009.
 Rodd Pribik, IoF, MBC, UMBI, March – December 2008.
 Samantha Porter, (Towson University), April - August 2008.
 Micah Weisenberg, (Towson University), April 2008 – Dec 2009.
 Nina Bondre, June 2008 – September 2009. (Started Duke Sept 2009).
 Elinor Hortle, (Towson University), September 2008 – August 2009.
 Kerri McDonald. (Towson University), Sept 2007-June 2008.

Lydia Davis (University of Swansea, Wales, UK), Oct 2004- June 2005
 Patrick Holley (University of Swansea, Wales, UK), Oct 2004- June 2005
 Stuart N. Malyn, (University of Swansea, Wales, UK), Oct 2005 - June 2006
 Geetika Bector, (JHU), Nov 2005 – April 2006.

High School Interns Mentored in my Lab

Krish Balani, May 2024 – July 2024
 Jill Young, October 2007 – June 2008.
 Harrison Bloom, June - Aug 2006.

Expert Teachers as Interns in the IoF

(This was a NSF program focused at exposing minority teachers to leading research)

Sunday Iwalaiye, (High School teacher undertaking Research experience in the IoF), July 2012.
 Sunday Iwalaiye, (High School teacher undertaking Research experience in the IoF), July 2011.
 Rebecca Denkin, (High School teacher undertaking Research experience in the IoF), July 2009.

Postdoctoral Fellows in my Lab

Dr Hirydesh Mishra, 2012 – 2014
 Dr Anatoliy Dragan, 2007 – 2009
 Dr Mike Previte, 2007 - 2010
 Dr Yongxia Zhang, 2006 – 2010
 Dr Kadir Aslan, 2003 - 2007
 Dr Ramachandran Badugu, 2002 – 2008
 Dr E. Matveeva, 2003 – 2005.
 Dr Meng Wu, 2002 – 2006
 Dr Mustafa Chowdhury, 2005 - 2008
 Dr Joanna Lukomska, 2003 - 2005

UMBC Business Managers Supervised at IoF

Caroleann Aitken, 2010 – 2013.
 Bill Devilbliss, 2010 – 2012.
 Tom Frechette, 2013 – 2014.

IoF Laboratory Technicians Supervised

Daniel Pierce, 2015 – 2016
 Buddha Mali, 2008 – 2015
 Sanchita Pandey, 2014
 Radmilla Pavlovic, 2009 – 2012
 Evgenia Barannikova, 2010 - 2013
 Michael Weisenberg, 2007 – 2009
 Rod Pribik, 2006 – 2010

Assistant Professors (Research Faculty, NTT) Supervised by Dr Geddes

Dr Jan O. Karolin, 2012 - 2015
 Dr Anatoliy Dragan, 2010 – 2013
 Dr Yongxia Zhang, 2010 – 2012
 Dr Kadir Aslan, 2007 - 2010

NSF Nanoscale Education Program

2 NSF-funded students spent time in my lab learning and experiencing nanotechnology, (July 7, 2014 - July 28, 2014).

Baltimore SCIART Students Studying in IoF

<https://sciart.umbc.edu/sciart-students-2016/>

Emily Roberts, Summer 2016
 Laurence Spekleman, Summer 2016.

Student Honors / Awards / Recognitions in my lab

2024 – Zach Nichols, Outstanding Graduate Research Award, Chemistry and Biochemistry Dept. at UMBC.

2024 – Daniel Pierce, UMBC Graduate Teaching Award.

Publications (> 350): (h-index: 74; > 12,000 citations, (as of 10-1-2025))

Published Peer-Reviewed Journal Papers

(Corresponding Author)

Z.E. Nichols, M. Zhang, V. Agarwal, B. Koepp, E. Denny, A. Al-Anesi, S. Gunasekara, A. Mutasim and (Chris D. Geddes)

“Applying Spoof-Plasmonic Metasurfaces to Microwave Sample Preparation”

RSC Materials Horizons – Under revision

D.R. Pierce, C. Cunningham, S.A. Villayer, A. Bajwah, S. Oluwarotimi and (Chris D. Geddes)

“Chemiluminescence-Induced Plasmonic Current (CIPC)”

Journal of Physical Chemistry C., 129, 31, 14057-14065, 2025. (DOI 10.1021/acs.jpcc.5c02750)

D.R. Pierce, C. Cunningham, S.A. Villayer, A. Bajwah, S. Oluwarotimi and (Chris D. Geddes)

“Fluorophore-Induced Plasmonic Current from Copper and Silver Mixed-Metal Films”

Journal of Physical Chemistry C., 129, 25, 11458-11467, 2025. (DOI 10.1021/acs.jpcc.5c01887).

D.R. Pierce, C. Cunningham, S.A. Villayer, A. Bajwah, S. Oluwarotimi and (Chris D. Geddes)

“Distance Dependence of Fluorophore-Induced Plasmonic Current”

Journal of Physical Chemistry C., 129, 24, 11031-11038, 2025. (DOI 10.1021/acs.jpcc.5c03555)

Z.E. Nichols, M. Zhang, J.B. Liang, T. Mcdavitt, A. Ali-Anesi, E. Denny, T. Alkhateeb, M. Bell and (Chris D. Geddes)

“Characterizing a Metal-Dielectric Interface for Microwave Bioprocessing”

ACS Applied Electronic Materials, 7, 6, 2384-2393, 2025. (DOI 10.1021/acsaelm.4c02175)

D.R. Pierce and (Chris D. Geddes)

“Direct Detection and Quantification of Aqueous Proteins via a Fluorescent Probe Through the Use of Fluorophore-Induced Plasmonic Current”

Biosensors, 15, 3, 2025. (DOI 10.3390/bios15030150)

D.R. Pierce and (Chris D. Geddes)

“Fluorophore-Induced Plasmonic Current-Based Detection of Aqueous Al^{3+} Ions: A Novel Sensing Strategy”

Journal of Physical Chemistry C., 129 (7), 3653-3658, 2025.

D.R. Pierce, Z.E. Nichols, C. Cunningham, S.A. Villayer, A. Bajwah, S. Oluwarotimi, H. Herbert and (Chris D. Geddes)

“Detection and Quantification of DNA by Fluorophore-Induced Plasmonic Current: A Novel Sensing Approach”

Sensors, 24,24, 2024 (DOI 10.3390/s24247985)

D.R. Pierce and (Chris D. Geddes)

“Fluorophore-Induced Plasmonic Current Based Detection of Aqueous Fe^{3+} Ions Using a Turn-On Fluorescence Probe and Copper Nanoparticle Substrates”

The Journal of Chemistry C., 128 (37),15537-15541, 2024.

D.R. Pierce, L. Saha and (Chris D. Geddes)

“Fluorophore-Induced Plasmonic Current Generation from Copper Nanoparticle Films”

ACS Omega, 9 (23), 25181-25188, 2024.

D.R. Pierce, M. Bobbin and (Chris D. Geddes)

“Fluorophore-induced Plasmonic Current Generation from Aluminium Nanoparticle Films”

The Journal of Physical Chemistry, 127, 1126-1134, 2023.

R. Knoblauch and (Chris D. Geddes)

“Plasmonic enhancement of nitric oxide generation”

Nanoscale, 13(28), 12288-12297, 2021.

R. Knoblauch, A. Harvey and (Chris D. Geddes)

“Metal-Enhanced Photosensitization of Singlet Oxygen (ME^1O_2) from brominated carbon nanodots on silver nanoparticle substrates”

Plasmonics, 16(5), 1765-1772, 2021.

R. Knoblauch, A. Harvey, E. Ra, K.M. Greenberg, J. Lau, E. Hawkins and (Chris D. Geddes)

“Antimicrobial carbon nanodots: photodynamic inactivation and dark antimicrobial effects on bacteria by brominated carbon”

Nanoscale, 13(1), 2021. (FRONT COVER ARTICLE)

- Z.E. Nichols, L. Saha, R. Knoblauch, T.M. Santaus and (Chris D. Geddes)
 “Development of a Microplate platform for high-throughput sample preparation based on Microwave Metasurfaces”
IEEE Access, 9, 37823-37833, 2021.
- J. Moskowitz and (Chris D. Geddes)
 “The Inverse relationship between Metal-Enhanced Fluorescence and Fluorophore-Induced Plasmonic current”
The Journal of Physical Chemistry Letters, 11, 19, 8145-8151, 2020.
- R. Knoblauch, J. Moskowitz, E. Hawkins and (Chris D. Geddes)
 “Fluorophore Induced Plasmonic Current: Generation-based detection of singlet oxygen”
ACS Sensors, 5, 4, 1223-1229, 2020.
- R. Knoblauch, H. Ben-Hamo, R. Marks and (Chris D. Geddes)
 “Spectral distortions in Zinc-based metal-enhanced fluorescence underpinned by fast and slow electronic transitions”
Chemical Physics Letters, 744, 137212, 2020.
- J. Moskowitz, R. Sindi and (Chris D. Geddes)
 “Plasmonic Electricity II: The effect of particle size, solvent permittivity, applied voltage and temperature on fluorophore-induced plasmonic current”
Journal of Physical Chemistry C., 124, 10, 5780-5788, 2020. (FRONT COVER ARTICLE)
- E. Lucas, R. Knoblauch, M. Combs-Bosse, S. E. Broedel and (Chris D. Geddes)
 “Low Concentration trypsin detection from a metal-enhanced fluorescence (MEF) platform: Towards the development of ultra-sensitive and rapid detection of proteolytic enzymes”
Spectrochimica Acta Part A-Molecular and Biomolecular Spectroscopy, 228, 117739, 2020.
- R. Knoblauch, H. Ben-Hamo, R. Marks and (Chris D. Geddes)
 “Spectral Distortions in Metal-Enhanced Fluorescence: Experimental Evidence for Ultra-Fast and Slow Transitions”
Journal of Physical Chemistry C., 124, 8, 4723-4737, 2020. (FRONT COVER ARTICLE)
- T. M. Santaus, K. Greenberg, P. Suri and (Chris D. Geddes)
 “Elucidation of a non-thermal mechanism for DNA/RNA fragmentation and protein degradation when using Lyse-It”
PLOS ONE, 14, 12, E0225475, 2019.
- J. Moskowitz and (Chris D. Geddes)
 “Plasmonic Electricity: Fluorophore Induced Plasmonic Current”
Journal of Physical Chemistry C., 123, 45, 27770-27777, 2019. (FRONT COVER ARTICLE)
- T. M. Santaus, F. Zhang, S. Li, O.C. Stine and (Chris D. Geddes)
 “Effects of Lyse-It on endonuclease fragmentation, function and activity”
PLOS ONE, 14, 9, e0223008, 2019.

T.M. Santaus, S. Li, L. Saha, W.H. Chen, S. Bhagat, O.C. Stine and (Chris D. Geddes)
 “A comparison of Lyse-It to other cellular sample preparation, bacterial lysing and DNA fragmentation technologies”
PLOS ONE, 14,7 e0220102, 2019.

R. D. Schmitz, R. Knoblauch, E. Ra and (Chris D. Geddes)
 “Alpha-fluorescence (Alpha S-1) from thermally stable carbon nanodots”
Chemical Physics Letters, 721, 123-128, 2019.

R. Knoblauch and (Chris D. Geddes)
 “Silvered conical-bottom 96-well plates: enhanced low volume detection and the metal-enhanced fluorescence volume/ratio effect”
Nanoscale, 11(10), 4337-4344, 2019.

R, Knoblauch, E. Ra and (Chris D. Geddes)
 “Heavy Carbon nanodots 2: plasmon amplification in Quanta Plate wells and the correlation with the synchronous scattering spectrum”
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J.H. Melendez, J. Hardick, M. Barnes, P. Barnes, Geddes, C.D., and (Gaydos, C.).
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Tonya M. Santaus, Shan Li, Paula Ladd, Amanda Harvey, Shannon Cole, O. Colin Stine and (Chris D. Geddes)
 “Rapid Sample Preparation with Lyse-It for *Listeria monocytogenes* and *Vibrio cholera*”
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 “Heavy Carbon Nanodots: A New Phosphorescent Carbon Nanostructure”
Physical Chemistry Chemical Physics, 20(22), 15518-15527, 2018.

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Bioenergy Research, 10(2), 438-448, 2017.

J.H. Melendez, T. Santaus, G. Brinsley, D. Kiang, B. Mali, J. Hardick, C.A. Gaydos, and (Chris. D. Geddes)
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Analytical Biochemistry, 510, 33-40, 2016.

N. Siraj, B. El-Zahab, S. Hamdan, T.E. Karam, L. H. Haber, M. Li, S. O. Fakayode, S. Das, B. Valle, R. M. Strongin, G. Patonay, H. O. Sintim, G. A. Baker, A. Powe, M. Lowry, J. O. Karolin, C. D. Geddes and (I. M. Warner).

“Fluorescence, Phosphorescence and Chemiluminescence”

Analytical Chemistry, 2016, 88, 170-202, 2016.

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R. D. Schmitz, J. O. Karolin, and (Chris D. Geddes).

“Plasmonic Enhancement of Intrinsic Carbon Nanodot Emission”

Chemical Physics Letters, 622, 124-127, 2015.

J. Karolin, and (Chris D. Geddes).

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The Journal of Physical Chemistry Letters, 6(6), 918-922, 2015.

J. Karolin and (Chris D. Geddes).

“Silica nanoparticle metrology using UB and Colloidal Ludox solutions”.

Dyes and Pigments, 112, 50-53, 2015.

K. Golberg, A. Elbaz, R. McNeil, A. Kushmaro, C. D. Geddes and (R. S. Marks).

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Journal of Nanoparticle Research, 16(12), 2770, 2014.

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“Extraction and Sensitive Detection of Toxins A and B from the human pathogen *Clostridium difficile* in 40 seconds using Microwave-Accelerated Metal-Enhanced Fluorescence”

Plos One, 9,8,e104334, 2014.

A. Dragan and (Chris D. Geddes)

“5-Color Multiplexed Microwave-Accelerated Metal-Enhanced Fluorescence: Detection and Analysis of Multiple DNA Sequences from within one Sample Well within a Few Seconds”

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J. Karolin and (Chris D. Geddes)

“Spectral Shifts in Metal-Enhanced Fluorescence”

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A. Dragan, A. Graham and (Chris D. Geddes)

“Fluorescence Based Broad Dynamic Range Viscosity Probes”

Journal of Fluorescence, 24,2, 397-402, 2014.

A. Dragan, R. Pavlovic and (Chris D. Geddes)

“Rapid Catch and Signal (RCS) Technology Platform: Multiplexed Three Color, 30s Microwave-Accelerated Metal-Enhanced Fluorescence DNA Assays”

Plasmonics, 9(6), 1501-1510, 2014.

H. Mishra, B. Mali, J. Karolin, A. Dragan and (Chris D. Geddes)

“Experimental and Theoretical Study of the Distance Dependence of Metal-Enhanced Fluorescence, Phosphorescence and Delayed Fluorescence in a Single System”

Physical Chemistry Chemical Physics (PCCP), 15, 19538-19544, 2013.

J. Karolin and (Chris D. Geddes)

“Metal-Enhanced Fluorescence based Excitation Volumetric Effect of Plasmon-enhanced Singlet Oxygen and Superoxide Generation”

Physical Chemistry Chemical Physics (PCCP), 15, 15740-15745, 2013.

B. Mali, A. Dragan, J. Karolin and (Chris D. Geddes)

“Photophysical Characterization and alpha-type delayed luminescence of rapidly prepared Au Clusters”

Journal of Physical Chemistry C., 117, 16650-16657, 2013.

J. H. Melendez, J.S. Huppert, M. Jett-Goheen, E. A. Hesse, N. Quinn, N., C. A. Gaydos and (Chris D. Geddes)

“Blind Evaluation of the Microwave-Accelerated Metal-Enhanced Fluorescence Ultra rapid and Sensitive Chlamydia Trachomatis test by use of Clinical Samples”

Journal of Clinical Microbiology, 51(9), 2913-292, 2013.

A.I. Dragan, B. Mali and (Chris D. Geddes)

“Wavelength-dependent Metal-Enhanced Fluorescence using synchronous spectral analysis”
Chemical Physics Letters, 556, 168-172, 2013.

Y. Zhang, B. Mali, C. Aitken and (Chris D. Geddes)

“Highly Sensitive Quantitation of Human Serum Albumin in Clinical Samples for Hypoproteinemia using Metal-Enhanced Fluorescence”
Journal of Fluorescence, 23(1), 187-192, 2013.

Jan O. Karolin and (Chris D. Geddes)

“Reduced lifetimes are directly correlated with excitation irradiance in Metal-Enhanced Fluorescence (MEF)”
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A. I. Dragan, R. Pavlovic, J. B. McGivney, J. R. Casas-Finet, E. S. Bishop, R. J. Strouse, M. A. Schenerman, and (Chris D. Geddes)

“Distance Dependence of Metal-Enhanced Fluorescence”
Plasmonics, 7(4), 739-744.

A. I. Dragan, R. Pavlovic, J. B. McGivney, J. R. Casas-Finet, E. S. Bishop, R. J. Strouse, M. A. Schenerman, and (Chris D. Geddes)

“SYBER Green I: Fluorescence Properties and Interaction with DNA”
Journal of Fluorescence, 22, 1189-1199, 2012.

A. Dragan, M. T. Albrecht, R. Pavlovic, A. M. Keane-Myers, and (Chris D. Geddes)

“Ultra-Fast pg/ml Anthrax toxin (PA) detection assay based on Microwave-Accelerated Metal-Enhanced Fluorescence”
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“Metal-Enhanced Fluorescence: The Role of Quantum Yield, Q_0 , in Enhanced Fluorescence”
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Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 85, 134-138, 2012.

Xavier Ragas, Yongxia Zhang, W. Massad, Chris D. Geddes and (Santi Nonell)

“Singlet Oxygen production enhancement by Silver Island Films”
Journal of Physical Chemistry C., 115 (33), 16275-16281, 2011.

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Chemical Physics Letters, 473, 120-125, 2009.

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Trade Marks

(Owner of the Trade Mark)

(Chris D. Geddes)

"Lyse-It" – USA Trade mark, Reg. No: 5,358,562, granted December 19th 2017.

(Chris D. Geddes)

"Lyse-It" – European Union Trade mark, Reg. No. 017027624, granted July 12th 2017.

(Chris D. Geddes)

"Lyse-It" – Canadian Trade Mark, Reg. No. TMA1050139, granted August 20th 2019.

Scientific Presentations

Conference Poster Presentations (not an exhaustive list) (*Presenter*), * - corresponding author

(Z. Nichols), M. Zhang, J. Liang, T. McDavitt, V. Agarwal and Chris D. Geddes*

“Improving Sample Preparation of Nucleic Acids and Proteins: Applications of Microwave Metasurfaces”

UMBC Graduate Research day, March 2024.

(Z. Nicholes) and Chris D. Geddes*

“Applications of Reactive Metasurfaces to Microwave-Assisted Sample Preparation: Improving Turnaround time in Biological Assays”

American Chemical Society Middle Atlantic Regional Meeting (MARM), June 2023.

(Z. Nichols) and Chris D. Geddes*

“Fluorophore Induced Plasmonic Current (FIPC) detection of DNA for the purposes of onsite assay development”

American Chemical Society, Fall National Meeting, August 2023.

(D. Pierce) and Chris D. Geddes*

“Plasmonic Current on noble metal films”

UMBC Graduate Research day, March 4th, 2022.

(Z. Nichols) and Chris D. Geddes*

“Passive Microwave Devices for Pathogen sample preparation. Applications in high-throughput and point of care settings”

American Chemical Society, Atlanta, USA, August 26th, 2021.

Chris D. Geddes* and (Daniel Pierce)

“Chemiluminescence Induced Plasmonic Current”

Chemistry-Biology Interface Program, College Park, MD, May 7th, 2021.

Chris D. Geddes* and (Daniel Pierce)

“Chemiluminescence-Induced Plasmonic Current”

UMBC Graduate Research Day, March 5th, 2021.

Chris D. Geddes* and (Zach Nichols)

“Modified Microplates for Faster Sample Preparation: Lysing Surfaces with Microwave Metasurfaces”

UMBC Graduate Research Day, March 5th, 2021.

Chris D. Geddes* and (R. Knoblauch)

“Photodynamic enhancement of antimicrobial properties from brominated carbon nanodots”

AAAS, online, February 2020.

K. Greenberg, J. Lau, (R. Knoblauch) and Chris D. Geddes*

“Determining the viability of brominated carbon nanodots as bacterial inactivators”

UMBC, Summer Undergraduate Research Festival (SURF), August 2019.

(D. Pierce), P.V. Le and Chris D. Geddes*

“Microwave-Accelerated Plasmonic Electricity”

UMBC, Summer Undergraduate Research Festival (SURF), August 2019.

(F. Zhang), T. Santaus, S. Li, O.C.Stine and Chris D. Geddes*

“Focused Microwave effects on RNase A, RNase B and DNase I”

American Chemical Society 47th Middle Atlantic Regional Meeting, Baltimore, USA, June 2019.

(E. Ra), R. Knoblauch and Chris D. Geddes*

“Detection of delayed fluorescence emission (αS_1) from aggregated forms of carbon nanodots”

American Chemical Society 47th Middle Atlantic Regional Meeting, Baltimore, USA, June 2019.

(E. Ra), R. Knoblauch and Chris D. Geddes*

“Metal-enhanced fluorescence and phosphorescence from brominated carbon nanodots on silver 96-well plates”

American Chemical Society 47th Middle Atlantic Regional Meeting, Baltimore, USA, June 2019.

Chris D. Geddes* and (R. Knoblauch)

“Development of Nano-Systems for the Metal-Enhanced Generation of Singlet Oxygen (ME^1O_2) from Carbon Nanodot Structures”

Gordon Research Conference, Les Diablerets, Switzerland, June 2019.

(T. Santaus) and Chris D. Geddes*

“The Proposed Mechanism behind Lyse-It®: A Rapid Sample Preparation Technique”

Annual Biophysical Society Meeting, Baltimore, USA, March 2-6th, 2019.

(T. Santaus) and Chris D. Geddes*

“Lyse-It®: A Rapid, <60 Second, Cellular Lysing Platform for Pathogenic Bacteria”

American Society of Microbiology Biothreats conference, Arlington, Virginia, USA, January 28-31st, 2019.

(J. Moskowitz), L. Saha and Chris D. Geddes*

“Fluorophore-Induced Plasmonic Current Protein Arrays”

Pittcon Conference Philadelphia, Pennsylvania. March 19th, 2019.

Chris D. Geddes* and (R. Knoblauch)

“Heavy Carbon Nanodots: A Potential Light-Activated Antimicrobial”

AAAS Annual Meeting, Washington D.C., USA, February 2019.

Chris D. Geddes* and (R. Knoblauch)

“A novel carbon nanodot architecture: Heavy Carbon Nanodots as New Photosensitizer for Antimicrobial Inactivation.

11th Frontiers in Chemistry & Biology Interface Symposium, U. Penn, Philadelphia, USA, May 2019.

(J. Moskowitz), L. Saha and Chris D. Geddes*

“Fluorophore-Induced Plasmonic Current Protein Assays”

Biophysical Society Annual Meeting, Baltimore, USA, March 6th 2019.

Chris D. Geddes* and (R. Knoblauch)

"Enhancing Decay Pathways of Luminescent Carbon Nanodots by Proximity to Metal Nanostructures"
UMBC Graduate Research Conference, UMBC, Baltimore, March 28th 2018.

Chris D. Geddes* and (J. Moskowitz)

"Fluorophore Induce Plasmonic Current"
UMBC Graduate Research Conference, UMBC, Baltimore, March 28th 2018.

Chris D. Geddes* and (T. Santaus)

"Viable Pathogenic Organism Transportation and Recovery from a Low Cost Support"
Annual BioPhysical Society Meeting, San Francisco, February 22, 2018.

Chris D. Geddes*, (R. Knoblauch), B. Bui and A. Raza.

"A novel carbon nanodot architecture: luminescent probe for potential immunodiagnostics"
Bio-X Asia International Conference 2018, Singapore, Asia, February 22, 2018.

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"Enhanced luminescence from silvered carbon nanodots: potential applications as an ultra-bright luminescence label"
Bio-X Asia International Conference 2018, Singapore, Asia, February 22, 2018.

Chris D. Geddes* and (T. Santaus)

"Rapid Sample Preparation and Detection of Pathogenic Bacteria and Biothreat Agents"
American Society of Microbiology (ASM) - BioThreat Meeting, Baltimore, February 11, 2018.

Chris D. Geddes* and (J. Moskowitz)

"Fluorophore Induced Plasmonic Current"
2018 UMBC Graduate Research Conference, UMBC, March 28, 2018.

Chris D. Geddes*, (R. Knoblauch), B. Bui and A. Raza.

"Brominated carbon nanodots for long-lived luminescence and pH-dependent sensing"
2018 UMBC Graduate Research Conference, UMBC, March 28, 2018.

Chris D. Geddes* and (J. Moskowitz)

"Plasmonic Electricity: Fluorophore Induced Plasmonic Current."
ACS 254th National Convention, Washington DC, August 23, 2017.

Chris D. Geddes* and (T. Santaus)

"Microwave Irradiation Generated Reactive Oxygen Species,"
ACS 254th National Convention, Washington DC, August 21, 2017.

Chris D. Geddes* and (R. Knoblauch)

"Brominated and iodinated <10 nm carbon nanodots,"
ACS National Meeting, Washington DC, August 1, 2017.

Chris D. Geddes* and (R. Knoblauch)

"Plasmon enhanced emission of carbon nanodots,"

Bio-X annual meeting, Bio-X Society, Israel, June 8, 2017.

Chris D. Geddes* and (T. Santaus)
"Focused microwave lysing of *Listeria monocytogenes* and *Vibrio cholerae*,"
American Society For Microbiology, New Orleans, June 1, 2017.

Chris D. Geddes* and (J. Moskowitz)
"Plasmonic Electricity,"
2017 BioPhysical Society Conference, Poster, BioPhysical Society, New Orleans, LA., February 15th, 2017.

Chris D. Geddes*, (K. Chahil), K., (L. Margevich), T. Santaus.
"Food Infections with *Listeria monocytogenes*"
UMBC Summer Undergraduate Research Fest, UMBC, August 9, 2017.

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"Microwave-Assisted Lysing of Ground Spinach and the subsequent Detection of Fe³⁺ and Mg²⁺"
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"Microwave-Assisted Lysing of *Listeria monocytogenes* and *Vibrio cholerae*"
UMBC Summer Undergraduate Research Fest, UMBC, August 9, 2017.

Chris D. Geddes* and (T. Santaus)
"Microwave Cellular Lysis and DNA Fragmentation of *Listeria monocytogenes* and *Vibrio cholerae* using Metal Geometry Structures"
Graduate Research Conference, UMBC, March 29, 2017.

Chris D. Geddes* and (J. Moskowitz)
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University of Maryland, Baltimore County Graduate Research Conference, UMBC, March 29, 2017.

Chris D. Geddes* and (R. Knoblauch)
"Functionalizing Carbon Nanodots: an exploration of halogenation and silver metal deposition for photoluminescence tuning"
2017 UMBC Graduate Research Conference, UMBC, March 1, 2017.

Chris D. Geddes* and (T. Santaus)
"Microwave Cell Lysis and DNA Fragmentation of *Listeria monocytogenes*"
American Society for Microbiology, Boston, June 16, 2016.

Chris D. Geddes* and (J. Melendez)
"Evaluation of Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) as a Diagnostic Platform for Detection of Sexually Transmitted Infections"
NIH's (National Institutes of Health) NIBIB POCTRN symposium, Bethesda, June 9th 2016.

Chris D. Geddes* and (T. Santaus)

"Cell Lysing and DNA fragmentation of *Listeria Monocytogenes* in one step"
BioPhysical Society, Los Angeles Conference Center, March 1, 2016.

Chris D. Geddes* and (T. Santaus)

"Cell lysing and DNA Fragmentation of *Listeria monocytogenes* in one step"
UMBC Summer Undergraduate Research Fest, August 10th 2016.

Chris D. Geddes*, (A. Abukhdair), (P. Ladd) and J. Moskowitz

"Plasmonic Electricity"
UMBC Summer Undergraduate Research Fest, August 10th 2016.

Chris D. Geddes*, (A. Harvey), (M. Cyr), (P. Ladd) and T. Santaus

"Rapid Cellular Lysing and DNA Fragmentation Using Microwave-Induced Lysing"
UMBC Summer Undergraduate Research Fest, August 10th 2016.

Chris D. Geddes*, (V. MacGougall), (S. Kim) and T. Santaus

"Iron detection in Microwave Induced Lysates"
UMBC Summer Undergraduate Research Fest, August 10th 2016.

Chris D. Geddes* and (J. Melendez)

"Can residual urethral swabs be used for detection of *Neisseria gonorrhoeae* and antimicrobial resistance markers"
29th IUSTI European Conference on Sexually Transmitted Infections, Barcelona, Spain, September 24, 2015.

Chris D. Geddes* and (R. Taylor)

"Determination of structural properties of fluorescent methane carbon nanodots"
ACS National Meeting, Boston, August 16, 2015.

Chris D. Geddes* and (J. Melendez)

"Ultra-Rapid Isolation and Detection of *Neisseria gonorrhoeae* by Microwave-Accelerated Methods"
115th General Meeting of the American Society for Microbiology, New Orleans, May 30th, 2015.

Chris D. Geddes*, (R. Taylor) and J. Karolin

"Probing the internal and external structure of carbon nanodots through fluorescence quenching"
Biophysical Society 59th Annual Meeting, Baltimore, USA, February 7th 2015.

Chris D. Geddes*, H. B. Hamo and (J. Karolin)

"Spectral Distortions in Metal-Enhanced Fluorescence"
Biophysical Society 59th Annual Meeting, Baltimore, USA, February 7th 2015.

Chris D. Geddes* and (T. Santaus)

"Extraction and Rapid Detection of *Listeria* DNA from Bovine Meat"
Biophysical Society 59th Annual Meeting, Baltimore, USA, February 7th 2015.

Chris D. Geddes* and (T. Santaus)

"Rapid Microbial Lysing and DNA Fragmentation by Microwave Focusing"
Biophysical Society 59th Annual Meeting, Baltimore, USA, February 7th 2015.

Chris D. Geddes* and (K. Losito)

"Development of Optically Clear Glasses for Studying Immobilized Ions, Proteins, and Fluorophore"
Summer Undergraduate Research Fest, UMBC, Baltimore, USA, August 5th, 2015.

Chris D. Geddes*, (G. Brinsley), J. Melendez and T. Santaus

"Microwave Lysing and DNA Fragmentation of *Neisseria gonorrhoeae*"
Summer Undergraduate Research Fest, UMBC, Baltimore, USA, August 5th, 2015.

Chris D. Geddes*, (J. Dohl), M. Negesse, J. Melendez and T. Santaus

"Microwave Lysing and DNA fragmentation of *Listeria monocytogenes*"
Summer Undergraduate Research Fest, UMBC, Baltimore, USA, August 5th, 2015.

Chris D. Geddes*, (J. O. Karolin) and R. Taylor

"Fluorescence Correlation Spectroscopy of Methane-Burn Carbon Nanodots"
Biophysical Society 58th Annual Meeting, San Francisco, February 15, 2014.

Chris D. Geddes*, (J. O. Karolin) and R. Taylor

"Methane Carbon Nanodots: Synthesis, Fluorescence Characterization and Singlet Oxygen Studies"
Biophysical Society 58th Annual Meeting, San Francisco, February 15, 2014.

Chris D. Geddes* and (J. Melendez)

"Lysing of GC"
Summer Undergraduate Research Fest, UMBC, August 2014.

Chris D. Geddes* and (J. Melendez)

"Ultra Rapid and Sensitive Detection of *Neisseria gonorrhoeae* and Antimicrobial Resistance Susceptibility"
STD Prevention Conference, Center for Disease Control, Atlanta, USA, June 9th, 2014.

(Chris D. Geddes)*

"The IoF"
Look Ahead Annual Conference, UMBC, April 15, 2014.

Chris D. Geddes* and (J. O. Karolin)

"In-situ nanoparticle sizing of colloidal silica"
Particles 2013 - Particles in Composites and Related Advanced Materials, Grand Hotel Dayton, Ohio, August 3, 2013.

Chris D. Geddes*, J. O. Karolin and (R. Taylor)

"Plasmon-Enhanced Photophysical Properties of Carbon Nanodots"
ACS Middle Atlantic Regional Meeting, Maryland Section of the American Chemical Society, Baltimore, USA, May 31, 2013.

Chris D. Geddes* and (J. O. Karolin)

"Excitation Volumetric Effect of Plasmon-Enhanced Singlet Oxygen and Superoxide Generation"
Biophysical Society 57th Annual Meeting, Philadelphia, February 2, 2013.

Chris D. Geddes* and (B. Mali)

"Metal-Enhanced Fluorescence Conical-96-well Plates for Enhanced Luminescence Detection"
Look Ahead, UMBC, April 17, 2013.

Chris D. Geddes* and (J. Melendez)

"Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) Point of Care Test for the Detection of Chlamydia trachomatis"
Graduate Research Conference, UMBC, February 21, 2013.

Chris D. Geddes* and (J. Audino)

"Enhanced Photostability of Fluorophores in the Presence of Antioxidants and Plasmon Supporting Nanoparticles"
Graduate Research Conference, UMBC, February 21, 2013.

Chris D. Geddes* and (R. Taylor)

"Metal-Enhanced Fluorescence (MEF) from Small Carbon Nanodots"
Graduate Research Conference, UMBC, February 21, 2013.

(*Ronald W. McNeil Jr.*), Jan O. Karolin and Chris D. Geddes*

"Theoretical Design and Fabrication of Substrates for Metal-Enhanced Fluorescence"
15th Annual Undergraduate Research Symposium in the Chemical and Biological Sciences at UMBC, MD, USA, Saturday October 20th 2012.

(*Melendez JH*), Gaydos CA, Geddes CD*

"Optimization and Clinical Testing of a Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) Assay for the Detection of *Chlamydia trachomatis"
International Union against Sexually Transmitted Infections (IUSTI) World Congress 2012, Melbourne, Australia. October 15 – 17, 2012.

(*Gaydos CA*), Melendez JH, Jett-Goheen M, Huppert Jill, Geddes CD*

"Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) Point of Care Test for the Detection of *Chlamydia trachomatis"
International Union against Sexually Transmitted Infections (IUSTI) World Congress 2012. Melbourne, Australia. October 15 – 17, 2012.

(*Jan Karolin*), Anatoliy Dragan, Chris Geddes*

"Metal-Enhanced Fluorescence (MEF): Developing a Unified Fluorophore Plasmon Model"
FluoroFest, Beltsville, Washington DC., MD, August 1-3, 2012.

(*Johan Melendez*), Charlotte Gaydos, Chris Geddes*

"Optimization and Clinical testing of a Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) Assay for detection of Chlamydia trachomatis"
FluoroFest, Beltsville, Washington DC., MD, August 1-3, 2012.

(*Rachel Taylor*), Jan Karolin, Chris Geddes*

“Plasmon-Enhanced Photophysical Properties of Carbon Nanodots”
FluoroFest, Beltsville, Washington DC., MD, August 1-3, 2012.

(*Radmila Pavlovic*), Evgenia Barannikova, Buddha Mali, Anatoliy Dragan and Chris D. Geddes*

“Advanced Plasmonic Surfaces for Metal-Enhanced Fluorescence”
ACS MARM, UMBC, May 31 - June 2, 2012.

(*Johan Melendez*), Charlotte Gaydos, Chris Geddes*

“Optimization and Clinical testing of a Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) Assay for detection of Chlamydia trachomatis”
ACS MARM, UMBC, May 31 - June 2, 2012.

(*Rachel Taylor*), Jan Karolin, Chris Geddes*

“Plasmon-Enhanced Photophysical Properties of Carbon Nanodots”
ACS MARM, UMBC, May 31 - June 2, 2012.

(*Jan Karolin*) and Chris Geddes*

“Metal-Enhanced Fluorescence based Solvent Relaxation”
ACS MARM, UMBC, May 31 - June 2, 2012.

(*Jan Karolin*), Anatoliy Dragan, Chris Geddes*

“Metal-Enhanced Fluorescence (MEF): Developing a Unified Fluorophore Plasmon Model”
E-MRS, Strasbourg, France, May 14th 2012.

Anatoliy Dragan Chris Geddes* and (*Curt Flory*)

“Plasmonic Electricity: A paradigm shift in the way we employ fluorescence-based detection”
Agilent Conference, CA, May 10th 2012.

(*Karina Goldberg*), Amit Elbaz, Yongxia Zhang, Anatoliy Dragan, Ariel Kushmaro, Robert Marks, Chris Geddes*

“Mixed-Metal substrates for application in Metal-Enhanced Fluorescence”
Nanotechnology Meeting, Ben Gurion University, Israel, May 2012.

(*Anatoliy Dragan*), Radmila Pavlovic and Chris Geddes*

Ultra fast and sensitive Anthrax PA exotoxin detection assay based on Microwave-Accelerated Metal-Enhanced Fluorescence
Look Ahead, UMBC, April 18, 2012.

(*Evgenia Barannikova*), Anatoliy Dragan and Chris Geddes*

“Metal-Enhanced Chemiluminescence from Advance Plasmonic Surfaces”
Look Ahead, UMBC, April 18, 2012.

(*Buddha Mali*), Anatoliy Dragan, Evgenia Barannikova and Chris Geddes*

“Au-Fluorescent labeling of protein and their photophysical characterization”
Look Ahead, UMBC, April 18, 2012.

(*Radmila Pavlovic*), Anatoliy Dragan and Chris Geddes*

“Multi-color Microwave acceleration Metal-Enhanced Fluorescence DNA technologies”
Look Ahead, UMBC, April 18, 2012.

Anatoliy Dragan, (*Buddha Mali*), Chris Geddes*

“Luminescence of Au-Protein Complexes: Metal-Enhanced Fluorescence, Delayed Emission and Microwaved-Based Preparation”
Biophysical Society Meeting, San Diego, CA February 25-March 1 2012.

(*Anatoliy Dragan*), Evgenia Barannikova, Chris Geddes*

“Metal-Enhanced Fluorescence Excitation Volumetric Effect (MEF EVE)”
Biophysical Society Meeting, San Diego, CA February 25-March 1 2012.

(*Rachel Taylor*), Jan Karolin and Chris Geddes*

“Metal-Enhanced Fluorescence (MEF) from Small Carbon Nanodots”
Biophysical Society Meeting, San Diego, CA February 25-March 1 2012.

Zhang, Y, (*Melendez JH*), Gaydos, C, Geddes CD*

“Development of a microwave: accelerated metal-enhanced fluorescence 40 s, <100 cfu/ml point of care assay for the detection of Chlamydia trachomatis and Neisseria gonorrhoea”.
19th meeting of International Society for Sexually Transmitted Diseases Research (ISSTD), Quebec, Canada, July 11, 2011.

(*Melendez JH*), Zhang Y, Gaydos C, Geddes C*

“Development of a Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) Assay as a Point-of-Care Assay for Detection of Neisseria gonorrhoeae”.
Young Investigator Presentation at the NIH/NIBIB Point-of-care Technologies Research Network (POCTRN) Symposium, Sacramento, CA, June 24th, 2011.

(*Feng C*), Whitford M, Dragan A, Geddes C, Stamatou N, Zhang L, Medvedev A, Cole L, Vogel SN, Cross A*.

“Sialyl residues modulate LPS-mediated signaling through the Toll-like receptor 4 complex”
Gordon Conference on Glycobiology, Lucca, Italy May 8-13, 2011.

(*Anatoliy Dragan*), Radmila Pavlovic and Chris Geddes*

“Anthrax PA exotoxin detection assay based on Microwave-Accelerated Metal-Enhanced Fluorescence: Ultra fast and sensitive”.
Look Ahead Symposium, UMBC April 2011.

(*Y. Zhang*), N. Bondre and C. D. Geddes*

“Metal-Enhanced Fluorescence based calcium Detection: greater than 100 - fold increase in signal/ Noise using Fluo-3 or Fluo-4 and Silver nanostructures”
55th Biophysical Society meeting, Baltimore, USA, 9th March 2011.

(*Anatoliy I Dragon*), Rada Pavlovic, Chris D. Geddes*

“Rapid Catch and Signal (RCS) Platform technology: multiplexed three-color , microwave - accelerated metal enhanced fluorescence 20 second DNA assay”

55th Biophysical Society meeting, Baltimore, USA, 7th March 2011.

(*Sheena A Young*) and Chris D. Geddes*

"Metal-enhanced Fluorescence based detection of Bisphenol A"

36th International Symposium on Environmental Analytical Chemistry, Rome, Italy, October 5-9th, 2010.

(*S.M. Tennant*), Y. Zhang, C.D. Geddes, J. .E Galen and M. M. Levine*,

"Ultra-Fast and Sensitive detection of Non-typhoidal Salmonella"

110th General meeting of the American Society of Microbiology, San Diego, CA, May 23-27th 2010.
poster number: 301.

(*Anatoliy Dragan*), Yongxia Zhang and Chris D. Geddes*

"Metal-Enhanced Fluorescence: Theory and Applications"

UMBC, "A look ahead", March 31st, 2010.

A. Dragan, E. Bishop, J.R. Casas-Finet, R. J. Strouse, M. A. Schenerman, and (*C. D. Geddes**)

"Metal-Enhanced Picogreen Fluorescence for Sensitive DNA Quantitation"

WCBP CMC Strategy forum and FDA Panel, January 24th 2010, Washington D.C.

Yongxia Zhang, Kadir Aslan and (*Chris D. Geddes**)

"Metal-Enhanced Fluorescence (MEF)"

Biophysical Society Meeting, Boston, USA. February 28th – March 4th 2009.

(*Anatoliy Dragan*) and Chris D. Geddes*

"Plasmonic Electricity: A Digital form of Metal-Enhanced Fluorescence"

Biophysical Society Meeting, Boston, USA. February 28th – March 4th 2009.

(*Kadir Aslan*), Yongxia Zhang and Chris D. Geddes*

"Rapid Detection of Troponin I from Serum using Microwave-Accelerated Metal-Enhanced Fluorescence"

Biophysical Society Meeting, Boston, USA. February 28th – March 4th 2009.

(*Kadir Aslan*), Michael Previte, Yongxia Zhang and Chris D. Geddes*

"Optimization of Silver Colloid-Deposited High-Throughput Screening Plates for Rapid and Sensitive Cardiac Risk Assessment"

Biophysical Society, Long Beach, CA, USA, 2-6TH February, 2008.

Kadir Aslan, Michael Previte, Yongxia Zhang and (*Chris D. Geddes**)

"Release and Detection of Anthrax DNA within a Minute using Focused Microwaves and Metal-Enhanced Fluorescence",

Biophysical Society, Long Beach, CA, USA, 2-6TH February, 2008.

Kadir Aslan, (Yongxia Zhang), Michael Previte and Chris D. Geddes*

"Plasmon-Controlled Fluorescence"

Biophysical Society, Long Beach, CA, USA, 2-6TH February, 2008.

Yongxia Zhang, Kadir Aslan, Michael Previte and (*Chris D. Geddes**)

“Metal-Fluorophore Interactions: Progress Towards A Unified Description of Metal-enhanced Fluorescence (MEF)”

Biophysical Society, Long Beach, CA, USA, 2-6TH February, 2008.

Michael J. R. Previte, Kadir Aslan, Yongxia Zhang and (*Chris D. Geddes**)

“Microwave-Accelerated Plasmon-Enhanced Luminescence: Platform Technology for Ultra Fast and Ultra Sensitive assays”.

Biophysical Society, Baltimore, USA. 3-7 March 2007.

(*Yongxia Zhang*), Kadir Aslan, Michael Previte and Chris D. Geddes*

“Plasmon-Enhanced Singlet Oxygen Generation”

Biophysical Society, Baltimore, USA. 3-7 March 2007.

Ramachandram Badugu, Joseph R. Lakowicz and (*Chris D. Geddes**)

“Smart Contact Lens: Noninvasive Device for Clinical Diagnostics”

NIH- PI Annual Meeting, June 23-25, 2005, Bethesda, Maryland, USA

Ramachandram Badugu, Joseph R. Lakowicz and (*Chris, D. Geddes**)

“A Glucose Sensing Contact Lens”

49th Biophysical Society Annual meeting, Long Beach, California, USA, February 12-16th 2005.

(*C. D. Geddes**), K. Aslan, J. R. Lakowicz

“Novel Metallic nanostructures for metal-enhanced fluorescence”

Particles 2004, Orlando, Florida, 6-9 March, 2004.

Ramachandram Badugu, Joseph R. Lakowicz and (*Chris, D. Geddes**)

“Novel glucose and anion probes for physiological monitoring and safeguard”

48th Biophysical Society Annual meeting, Baltimore, MD, USA, February 14-18, 2004.

(*Chris D. Geddes*), Ignacy Gryczynski, Alexandr Parfenov and Joseph R. Lakowicz*

“Luminescent blinking from silver, gold and copper nanoparticles: A new class of probes for imaging and localisation”

SPIE, San Jose, CA, 25th Jan, 2004.

Ramachandram Badugu, Joseph R. Lakowicz and (*Chris D. Geddes**)

“A glucose sensing contact lens”

SPIE, San Jose, CA, 26th Jan, 2004.

Ramachandram Badugu, Joseph R. Lakowicz and (*Chris, D. Geddes**)

“High affinity Glucose sensitive probes: New opportunities for physiological glucose monitoring”

8th conference on Methods and Applications of Fluorescence (MAFS), at Prague, Czech republic, August 24 - 27, 2003.

(*Chris D. Geddes*), Alexandr Parfenov, David Roll and Joseph R. Lakowicz*

“Nobel metal surfaces for applications in metal-enhanced fluorescence”

47th Annual Biophysical Society Meeting, San Antonio, Texas, USA, March 1-5, 2003.

(*Chris D. Geddes*), Ignacy Gryczynski, Joanna Malicka, Zygmunt Gryczynski and Joseph R. Lakowicz*
 "Metal-enhanced fluorescence"
 NCRR annual conference, Washington DC, June 23rd-25th, 2002.

Joseph R. Lakowicz, Y. Shen, S. D'Auria, J. Malicka, Z. Gryczynski, I. Gryczynski – Presented by (*Chris D. Geddes**)
 "Radiative Decay Engineering: Biophysical applications"
 46th Annual Biophysical Society meeting, San Francisco, California, USA, Feb 23-27th 2002.

I. Gryczynski, G. Piszczek, Z. Gryczynski, J. R. Lakowicz and (*Chris D. Geddes**)
 "Four-Photon Excitation"
 46th Annual Biophysical Society meeting, San Francisco, California, USA, Feb 23-27th 2002.

(*Chris D. Geddes*), Jan Karolin and David J. S. Birch*
 "Multiphoton excited fluorescence anisotropy for nanometre particle sizing in static and dynamic silica colloids"
7th International Conference on Methods and Applications of fluorescence Spectroscopy,
 Amsterdam, The Netherlands, 16-19th September 2001.

(*R. Leishman*), C. D. Geddes, N. P. Rhodes, P. W. Stanier and D. J. S. Birch*
 "Silica particle growth under alkaline conditions using time resolved fluorescence anisotropy"
7th International Conference on Methods and Applications of fluorescence Spectroscopy,
 Amsterdam, The Netherlands, 16-19th September 2001.

(*D.J.S.Birch**), C.D.Geddes, J. Karolin and K. Wynne
 "Multiphoton excited fluorescence particle metrology: Application to silica hydrogels"
SPIE, Advances in Fluorescence Sensing Technology V, San Jose Convention Center, San Jose,
 California, USA, 20-26th January 2001.

K. Apperson, (*C.D.Geddes*), D.J.S.Birch* and I. McKeown
 "Protein dynamics and binding in silica gel"
Physics Research and R & D by younger physicists, CLRC Rutherford Appleton Laboratory, UK, 12th November 1999.

(*Chris D. Geddes*) and David J. S. Birch*
 "A fluorescence study of syneresis in silica hydrogels"
6th International Conference on Methods and Applications of fluorescence Spectroscopy,
 Paris, France, 12-15th September 1999.

D. J. S. Birch* and (*C. D. Geddes*)
 "Fluorescence metrology of nanometre particles in sol-gels"
The 14th Quantum Electronics Conference, Manchester, UK, 6-9th September 1999.

(*J. Aladekomo*), Chris D. Geddes, O.J.Rolinski and D.J.S.Birch*
 "Metal-ion detection using fluorescence lifetime sensors"
European Quantum Electronics Conference, EQEC'98, Glasgow, Scotland, UK, 14-18th September 1998.

(*Chris D. Geddes*) & D.J.S.Birch*

"A fluorescence study of the nanostructure of silica hydrogels"

The Jablonski centennial conference on luminescence and photophysics, Torun, Poland, 23-27th July, 1998.

Chris D. Geddes*

"New Indolium and Quinolinium dyes sensitive to aqueous halide ions"

7th International conference on organic dyes and Pigments, Spindleruv Mlyn, Czech Republic, May 17-21st, 1998.

(*Chris D. Geddes*), J.M.Chevers, D.J.S.Birch* and D.Ward

"Probing the sol-gel transition in SiO₂ hydrogels using near infrared fluorophores"

Vth International Conference on Methods and Applications of fluorescence Spectroscopy, Berlin, Germany, 21-24th September, 1997.

Conference Poster Prizes (not an exhaustive list)

(*Presenter*), * - corresponding author

Chris D. Geddes* and (R. Knoblauch)

1st Place Poster award, AAAS Conference, August 2020.

Chris D. Geddes* and (R. Knoblauch)

1st Place Poster award, AAAS Conference, September 1st, 2019.

Chris D. Geddes* and (T. Santaus)

1st Place Poster Award, 6th Annual Conference on Microbiology, October 17th, 2017.

Chris D. Geddes* and (R. Knoblauch)

2nd Place Poster award, Bio-X Society International annual conference, Israel, June 5th, 2017.

Chris D. Geddes* and (J. Melendez)

American Society of Microbiology (ASM) Annual Conference

Poster recognized as "outstanding" by the ASM

Conference Abstracts (not an exhaustive list)

(*corresponding author*)

Lahari Saha and (*Chris D. Geddes*)

Enhancing fluorophore-induced plasmonic current for converting solar energy

Biophysical Journal, 123 (3), 142A-142A, 2024.

Lahari Saha and (*Chris D. Geddes*)

Fluorophore-induced plasmonic current for solar energy collection

Biophysical Journal, 122 (3), 455A-455A, 2023.

J. Moskowitz and (*Chris D. Geddes*)

Fluorophore-Induced plasmonic current

Biophysical Journal, 116 (3), pgs 568A-569A, 2821-pos, 2019.

T. M. Santaus and (*Chris D. Geddes*)

The Proposed Mechanism behind lyse-It: A rapid sample preparation technique
Biophysical Journal, 116 (3), pgs 274A, 1347-pos, 2019.

R. Knoblauch and (*Chris D. Geddes*)

Development of a new antimicrobial photosensitizer from brominated carbon dots: Metal-Enhanced phosphorescence and singlet oxygen generation
Biophysical Journal, 116 (3), pgs 34A, 169-plat, 2019.

Jacquelyn Audino and (*Chris D. Geddes*)

Enhanced Photostability of Fluorophores in the Presence of Antioxidants and Plasmon Supporting Nanoparticles

Submitted to 57th Annual Biophysical Society Meeting (Oct 1st 2012), Philadelphia, Feb 2-6, 2013.

Rachel Taylor and (*Chris D. Geddes*)

Plasmonic Engineering of Singlet Oxygen Generation from Carbon NanoDots

Submitted to 57th Annual Biophysical Society Meeting (Oct 1st 2012), Philadelphia, Feb 2-6, 2013.

Jan O. Karolin and (*Chris D. Geddes*)

Excitation Volumetric Effect of Plasmon-Enhanced Singlet Oxygen and Super Oxide Generation

Submitted to 57th Annual Biophysical Society Meeting (Oct 1st 2012), Philadelphia, Feb 2-6, 2013.

Y. Zhang, N. Bondre and (*Chris D. Geddes*)

Metal-Enhanced Fluorescence based calcium Detection: greater than 100 - fold increase in signal/ Noise using Fluo-3 or Fluo-4 and Silver nanostructures

Biophysical Soc meeting, Baltimore, USA, 6-9th March 2011.

Anatoliy I Dragon, Radmilla Pavlovic, (*Chris D. Geddes*)

Rapid Catch and Signal (RCS) Platform technology: multiplexed three-color , microwave - accelerated metal enhanced fluorescence 20 second DNA assay.

Biophysical Soc meeting, Baltimore, USA, 6-9th March 2011.

Michael J. R. Previte, Kadir Aslan, Yongxia Zhang and (*Chris D. Geddes*)

Microwave-accelerated plasmon-enhanced luminescence: Platform technology for ultra fast and ultra sensitive assays

Biophysical Journal,: 162A-162A, Jan 2007.

Aslan K, Previte MJR, Zhang YX, Geddes, CD

Metal-enhanced fluorescence (MEF): Progress towards a unified plasmon-fluorophore theory

Biophysical Journal,: 371A-371A Suppl. S Jan, 2007.

Zhang YX, Aslan K, Previte MJR, Geddes, CD

Plasmon-enhanced singlet oxygen generation

Biophysical Journal, 519A-519A Suppl. S, Jan 2007.

Aslan K, Previte MJR, Zhang YX, Geddes, CD

Ultra-fast and sensitive DNA hybridization assays: Application to genomic anthrax detection in < 30 seconds

Biophysical Journal, 552A-552A Suppl. S Jan 2007.

R. Badugu, J. R. Lakowicz and Chris D. Geddes,

“Ophthalmic glucose monitoring for clinical assessment using disposable lenses,

Biophysical Journal, **88** (1): 164A Part 2 Suppl. S Jan 2005.

Chris D. Geddes, Kadir Aslan, Ramachandrum Badugu and Joseph R. Lakowicz,

“Novel glucose and anion organic and plasmonic probes for physiological monitoring and safeguard”,

Biophysical Journal 86 (1): 610A-610A Part 2 Suppl. S Jan 2004

Chris D. Geddes, Kadir Aslan and Joseph R. Lakowicz,

“Plasmonic small molecule sensing”

Particles 2004, Orlando 2004.

Chris D. Geddes, Kadir Aslan, and Joseph R. Lakowicz

“Novel Metallic nanostructures for metal-enhanced fluorescence”

Particles 2004, Orlando 2004.

Chris D. Geddes, Kadir Aslan, and Joseph R. Lakowicz,

“Advanced Surfaces for Metal-Enhanced Fluorescence”

Annual Biophysical Society Meeting, Long Beach, *Biophysical Journal* **88** (1): 374A-374A Part 2 Suppl. S 2005.

Geddes CD, Roll D, Parfenov A, Lakowicz, JR.

“Noble-metal surfaces for use in metal-enhanced fluorescence”

Biophysical Journal 84 (2): 477A-477A Part 2, Feb 2003.

Major / International Invited Lectures / Key-note Lectures

(Presenting author)

(Chris D. Geddes)

“Plasmonic Electricity: Fluorophore Induced Plasmonic Current”

ACS MARM: Nanoparticles, University of Delaware, June 11th 2021.

(Chris D. Geddes)

“Plasmonic generation of electricity: A remarkable *Plasmon to Current technology* which promises to change the way we both think of and use fluorescence spectroscopy today”.

4th International Conference on Enhanced Spectroscopies, London, Canada, June 19th 2019.

(Chris D. Geddes)

“The LacriPen – A portable handheld laboratory in the palm of your hand”

Diagnostics Panel, Ophthalmic Innovation Summit, San Diego, May 2nd, 2019.

(Chris D. Geddes)

"Plasmonic generation of electricity: A remarkable *Plasmon to Current technology* which promises to change the way we both think of and use fluorescence spectroscopy today".

Bio-X Conference, Israel, Dead Sea, March 4th 2019.

(Chris D. Geddes)

"The LacriPen - A portable handheld Ophthalmic laboratory"

Bio-X Asia 2018, Singapore, Asia, February 22, 2018.

(Chris D. Geddes)

"Plasmonic Generation of electricity: A Plasmon to Current Technology"

Bio-X Asia 2018, Singapore, Asia, February 21, 2018.

(Chris D. Geddes)

"Can Professors be successful entrepreneurs from within an academic setting"

Bio-X Society annual conference, Israel, Natanya, June 8, 2017.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence, A paradigm shift in how we think and use fluorescence spectroscopy today - Plasmonic Electricity,"

Bio-X Society annual conference, Israel, Natanya, June 5th, 2017.

(Chris D. Geddes)

"Can Professors be Entrepreneurs - The Lyse-It story"

John's Hopkins University, John's Hopkins Hospital, 7th Floor, March 23rd, 2017.

(Chris D. Geddes)

"Bringing Entrepreneurship to Science"

Johns Hopkins University, Mt Washington Conference center, October 19th, 2017.

(Chris D. Geddes)

"Lyse-It: A Paradigm shift in Cellular Lysing"

UMBC Biotechnology Symposium, UMBC, January 28th 2017.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence for Ultra fast and sensitive Diagnostics"

Walter Reed Symposium, Washington DC, USA, December 6, 2016.

(Chris D. Geddes)

"The LacriPen"

Ophthalmic Innovation Summit, Chicago, October 11th, 2016.

(Chris D. Geddes)

"Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF): A new and improved technology for the ultra rapid and ultra sensitive detection of pathogens"

BARDA, Biomedical Advanced Research and Development Agency, Washington DC, April 21, 2016.

(Chris D. Geddes)

"MEF: A paradigm shift in how we think and use Fluorescence Spectroscopy Today"
Kent State University, Kent, USA, April 15th, 2016.

(Chris D. Geddes)

"Lyse-it - An ultra Rapid and cost effective cellular lysing Platform"
Bio-X Annual Conference, Negev, Israel, June 1, 2015.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence"
Bio-X Annual Conference, Negev, Israel, May 28th, 2015.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence"
BASF conference, Wyandotte, USA, January 13, 2015.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence"
30 Years of SPR conference, Nanyang Technical University, Singapore, November 5, 2013.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A Unified Plasmon Fluorophore Description"
UPN 2013, Deep UV Plasmonics, Osaka University and UPN, Japan, Osaka, Japan, October 27, 2013.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence, Theory and Applications"
NanoSensor Photonics, Bio-X Israel, Eilat, Israel, February 10, 2013.

(Chris D. Geddes)

"Microwave-Accelerated Metal-Enhanced Fluorescence"
NanoSensor Photonics, Bio-X Israel, Eilat, Israel, February 10, 2013.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon Fluorophore Description"
E-MRS, Strasbourg, France, May 16th 2012.

(Chris D. Geddes)

"Ultra Fast and Ultra Sensitive Pathogen Detection"
NIH NIAID National Research Centers for BioDefense and Emerging Infectious Diseases Annual Meeting, Amelia Island, Florida, March 26-28th, 2012.

(Chris D. Geddes)

"Multiplexed Ultra Fast and Sensitive Bioagent Assays"
Mid-Atlantic Regional Center of Excellence for Bioagents and emerging infectious diseases (MARCE) regional meeting, Airle, VA, December 20th, 2011.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon-Fluorophore Description"
Conference Opening Plenary Lecture - NanoSensorPhotonics, Israel, 6th November 2011.

(Chris D. Geddes)

"Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) based Ultrafast and Ultra Sensitive Multiplexed Pathogen detection"
National NIH RCE meeting, Denver, Co, April 5th 2011.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A paradigm Shift in the way we both think and use Fluorescence Spectroscopy today"
Chemistry Department, Iowa State University, Ames, Iowa, October 22nd, 2010.

(Chris D. Geddes)

"Application of Microwave-Accelerated Metal-Enhanced Fluorescence in the development of a high sensitivity residual DNA assay" (*Plenary Lecture*).
MedImmune Annual Conference in Gaithersburg, Maryland, May 6th 2010.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon-fluorophore description"
MAF 11, Methods and Applications of Fluorescence Spectroscopy 11, Budapest, Hungary, September 7th 2009. (*Plenary Lecture*).

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Plasmonic Electricity".
American Chemical Society, Washington D.C., August 2009.

(Chris D. Geddes)

"Sex in the City, Safe or Not ? 100 Genome copy, 30 second STD sensing Platform"
18th ISSTD, (International Society for STD research), London, England, June 30th 2009.

(Chris D. Geddes)

"Highlighted Technology: Microwave-Accelerated Metal-Enhanced Fluorescence"
NIH / NIBIB Private Public Partnerships and POCTRN meeting - Seattle, WA, USA, April 2nd, 2009.

(Chris D. Geddes)

"Plasmonic Nanohole Arrays for Multiplexed Sensing"
Bio –Rad, Hercules, Berkley, CA, USA. April 24th 2008.

(Chris D. Geddes)

"Metal-enhanced Fluorescence: A paradigm shift in the way we both think and use fluorescence spectroscopy".
Northwest Regional Cytometry meeting, Portland, OR, March 15th 2008.

(Chris D. Geddes)

"Microwave-Accelerated Metal-Enhanced Highly Multiplexed Bioagent assays"

Mid Atlantic Regional Center for Excellence on Emerging and Infectious diseases, regional MARCE meeting, Turf Valley, Maryland, March 6th 2008.

(*Chris D. Geddes*)

“Anthrax Detection in < 30 seconds”,

Biophysical Society Meeting, Long Beach, CA, USA, February 4th 2008.

(*Chris D. Geddes*)

“Anthrax detection in clinical samples in <30 seconds”

MARCE Regional Meeting, Pittsburgh, PA, September 26-28, 2007.

(*Chris D. Geddes*)

“Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF)”

Fraunhofer Inc., Delaware, May15, 2007.

(*Chris D. Geddes*)

“Metal-enhanced Fluorescence”

Mid Atlantic Regional Meeting (MARM) of the American Chemical Society, ACS, Hershey, PA, June 5th 2006.

Kadir Aslan, Joseph R. Lakowicz and (*Chris D. Geddes*)

“Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF): A New Technology for Ultra Fast and Ultra Bright Immunoassays”

American chemical Society Meeting, August 28th, 2005. Washington, DC, USA.

(*Chris D. Geddes*)

“A Glucose sensing contact lens: A new technology for physiological safeguard”

August 4th, 2005, Los Alamos National Laboratory, New Mexico, USA.

(*Chris D. Geddes*)

“Plasmonics in Biology and Medicine: An emerging Scientific Frontier”

August 4th, 2005, Los Alamos National Laboratory, New Mexico, USA.

(*Chris D. Geddes*)

“Metal-enhanced Fluorescence: The Final Frontier”

August 5th, 2005, Los Alamos National Laboratory, New Mexico, USA.

Kadir Aslan and (*Chris D. Geddes*)

“Microwave-Accelerated Metal-Enhanced Fluorescence: A New Technology for Ultra Bright and Ultra Fast Immunoassays”

Biophotonics 2005, ACS, June 5-8th 2005, Wyndham Orlando resort, Orlando, Florida, USA.

Kadir Aslan, Joseph R. Lakowicz and (*Chris D. Geddes*)

“Advanced Surfaces for Metal-Enhanced Fluorescence”

Biophysical Society Meeting, February 15th, 2005, Long Beach, California, USA.

(Chris D. Geddes)

"Radiative decay engineering: The use of metallic nanostructures to control fluorescence emission"
Optical Imaging 2004, NIH, Bethesda, MD, USA, September 20th 2004.

(Chris D. Geddes)

"Plasmonic small molecule Sensing"
Particles 2004, Orlando, Florida, USA, 6-9 March 2004.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence"
Institut fur experimentalphysik, Graz, Austria, April 19th 2002.

(Chris D. Geddes)

"Radiative Decay Engineering" – For Joseph R. Lakowicz and CFS.
7th International Conference on Methods and Applications of fluorescence Spectroscopy,
Amsterdam, The Netherlands, 16-19th September 2001.

(DJS Birch), CD Geddes, J Karolin, O Rolinski and K Apperson

"Fluorescence nanometrology in sol-gels"
7th International Conference on Methods and Applications of fluorescence Spectroscopy,
Amsterdam, The Netherlands, 16-19th September 2001.

(DJS Birch), CD Geddes and Jan Karolin

"Silica nm particle growth in sol-gels using fluorescence anisotropy decay"
3rd Prague's Workshop on Molecular Photophysics and Dynamics, Prague, Czech Republic, March 15-17th 2001.

(DJS Birch) and C D Geddes

"Fluorescence metrology of silica sol-gels: The effect of D₂O and inorganic salts"
Modern trends in Inorganic Chemistry meeting, Bangalore, January 2000.

K.Apperson, J.Chevers, (D.J.S.Birch), and Chris D. Geddes

"The application of fluorescence depolarisation to dye uptake and particle sizing in silica sols"
SPIE, International Symposium on Biomedical Optics, San Jose Convention Center, San Jose, California, USA, 23-29 Jan. 1999.

(D.J.S.Birch), A.Volkmer, Bai Yang-Hong, K.Wynne and Chris D. Geddes

"Multiphoton-excited intrinsic fluorescence spectroscopy"
European Quantum Electronics Conference, EQEC'98, Glasgow, Scotland, UK, 14 -18 Sept, 1998.

(Chris D. Geddes), J.M.Chevers and D.J.S.Birch

"Probing the sol-gel transition in SiO₂ Hydrogels using near Infrared anisotropy"
Silica'98 - An International Conference on Silica Science technology: From S(Synthesis) to A(Applications), Mulhouse, France, September 1- 4, 1998.

(Chris D. Geddes) and P. Douglas

"Catching the light"

The American School of Paris, Paris, France, 29-30 May 1998.

(Chris D. Geddes)

"Optical sensors"

9th International Conference on Condensed Matter Physics, Bulgaria, Varna, 9 -13 Sept 1996.

Oral presentations

(Presenting author)

Chris D. Geddes* and (D. Pierce)

"Fluorophore-Induced Plasmonic Current (FIPC) for the detection of Biological Species for the Purposes of Assay Development and Onsite Detection"

Materials Research Society (MRS) Spring Meeting, April 2024.

Chris D. Geddes* and (Zach Nichols)

"Designing Spoof Plasmonic Metasurfaces (SPMs) for Microwave Frequencies and Applications in Biological Processing"

Materials Research Society (MRS) Spring Meeting, April 2024.

Chris D. Geddes* and (Lahari Saha)

"Enhancing Fluorophore-Induced Plasmonic Current for Converting Solar Energy"

BioPhysical Society Annual Meeting, Spring 2024.

Chris D. Geddes* and (Lahari Saha)

"Fluorophore-Induced Plasmonic Current for Solar Energy Collection"

BioPhysical Society Annual Conference, February 2023.

Chris D. Geddes* and (Lahari Saha)

"Fluorophore-Induced Plasmonic Current for Solar Energy Collection"

American Chemical Society Meeting, March 2023.

Chris D. Geddes* and (D. Pierce)

"Fluorophore-Induced Plasmonic Current for the Detection of Aqueous Metal ions"

UMBC Graduate Research Day, May 5th 2023.

Chris D. Geddes* and (D. Pierce)

"Fluorophore-Induced Plasmonic Current (FIPC) for the Detection of DNA and Proteins"

American Chemical Society Mid Atlantic Meeting, June 10th 2023.

Chris D. Geddes* and (D. Pierce)

"Fluorophore-Induced Plasmonic Current for the Detection of Biological Species"

American Chemical Society National Conference, August 16th 2023.

Chris D. Geddes* and (Lahari Saha)

"Plasmonic Current for Monitoring Excited-State Kinetics"

Materials Research Society, May 2022.

Chris D. Geddes* and (D. Pierce)

“Fluorophore-Induced Plasmonic Current (FIPC) detection of Ion species”
American Chemical Society National Conference, Chicago, USA, August 23rd, 2022.

Chris D. Geddes* and (D. Pierce)

“Mixed Metals films for Plasmonic Current Detection”
Materials Research Society Spring Symposium, May 23rd, 2022.

(Chris D. Geddes)

“Can Professors be successful Entrepreneurs from within an Academic setting”
Northwestern University, August 19th 2021.

(Chris D. Geddes)

“Plasmonic Electricity: Fluorophore Induced Plasmonic Current”
Portland State University, Chemistry Dept., Online Seminar – Feb., 12th 2021.

(Chris D. Geddes)

“Plasmonic Electricity: Fluorophore Induced Plasmonic Current”
UMBC, Chemistry and BioChemistry weekly seminar series (online), November 13th, 2020.

(Chris D. Geddes)

“Plasmonic Electricity: Fluorophore Induced Plasmonic Current”
Ben Gurion University, Israel, (online), October 25th, 2020.

Chris D. Geddes* and (R. Knoblauch)

“Tuning light activated antimicrobial character from a carbon nanodot architecture”
UMBC, Chemistry and Biochemistry interface program, (online), May 2020.

Chris D. Geddes* and (R. Knoblauch)

“Photodynamic enhancement of antimicrobial properties from brominated carbon nanodots”
AAAS – Online, February 2020.

Chris D. Geddes* and (R. Knoblauch)

“Development of Nano-Systems for the Metal-Enhanced Generation of Singlet Oxygen (ME^1O_2) from Carbon Nanodot Structures”
Gordon Research Conference, Les Diablerets, Switzerland, June 2019.

(Chris D. Geddes)

“Lyse-It”
Bio-X Annual Conference, Dead Sea, Israel, March 5th 2019.

(Chris D. Geddes)

“Understanding how money thinks”
Entrepreneur session @ Bio-X Annual Conference, Dead Sea, Israel, March 5th 2019.

(Chris D. Geddes)

"Creating Enterprise value from within an academic setting: Can Professors be successful entrepreneurs"

Entrepreneur session @ Bio-X Annual Conference, Dead Sea, Israel, March 5th 2019.

Chris D. Geddes* and (R. Knoblauch)

"Metal-enhanced phosphorescence and singlet oxygen generation from brominated carbon nanodots"
Biophysical Society Annual Meeting, Baltimore, USA, March 2019.

Chris D. Geddes* and (R. Knoblauch)

"Development of Nano-Systems for the Metal-Enhanced Generation of Singlet Oxygen (ME^1O_2) from Carbon Nanodot Structures"

Gordon Research Conference, Les Diablerets, Switzerland, June 2019.

Chris D. Geddes* and (T. Santaus)

"The Proposed mechanism behind Lyse-It: A rapid sample preparation technique"

Biophysical Society Annual Meeting, Baltimore, USA, March 2019.

Chris D. Geddes* and (R. Knoblauch)

"Heavy carbon nanodots: A potential light activated antimicrobial"

AAAS, Washington DC, USA, February 2019.

Chris D. Geddes* and (T. Santaus)

"Lyse-It: A rapid, < 60 second, cellular lysing platform for Pathogenic bacteria"

ASM Biothreats, Arlington, VA, January 2019.

(Chris D. Geddes)

"How to commercialize an idea: The Lyse-It and Encue Companies"

A-Star Central Workshop on Commercialization, Singapore, Asia, February 23, 2018.

(Chris D. Geddes)

"Can Professors be entrepreneurs from within an academic setting"

Bio-X Asia 2018, Singapore, Asia, February 22, 2018.

Chris D. Geddes* and (R. Knoblauch), B. Bui and A. Raza.

"A novel carbon nanodot architecture: luminescent probe for potential immunodiagnostics"

Bio-X Asia 2018, Singapore, Asia, February 21, 2018.

Chris D. Geddes* and (T. Santaus)

"Rapid Sample Preparation and Detection of Pathogenic Bacteria and Biothreat Agents"

American Society of Microbiology (ASM) - BioThreat Meeting, Baltimore, February 11, 2018.

(Chris D. Geddes)

"Ultra fast 30 second sample preparation and the subsequent Ultra fast identification of bacterial pathogens"

Walter Reed, Washington DC, January 9, 2018.

(Chris D. Geddes)

"Lyse-It: A technology for ultra rapid and ultra fast cellular lysing and DNA / RNA fragmentation"
6th Annual Conference on Microbiology,
Microbiology Society, Baltimore, October 17th, 2017.

Chris D. Geddes* and (T. Santaus)

"Microwave Irradiation Generated Reactive Oxygen Species"
ACS 254th National Convention, Washington DC, August 21st, 2017.

Chris D. Geddes* and (R. Knoblauch)

"Brominated and iodinated <10 nm carbon nanodots: "Heavy Carbon"
Bio-X annual meeting, Bio-X, Netanya Israel, June 7th, 2017.

(Chris D. Geddes)

"The LacriPen"
Ophthalmic Innovation Summit, Los Angeles, May 4th, 2017.

Chris D. Geddes* and (J. Moskowitz)

"Plasmonic Electricity: Fluorophore Induced Plasmonic Current"
University of Maryland, Baltimore County Graduate Research Conference, UMBC, March 29th, 2017.

Chris D. Geddes* and (R. Knoblauch)

"Functionalizing Carbon Nanodots: an exploration of halogenation and silver metal deposition for photoluminescence tuning"
University of Maryland, Baltimore County Graduate Research Conference, UMBC, March 1st, 2017.

(Chris D. Geddes)

"Detection of Chlamydia and Gonorrhea by Microwave-Accelerated Metal-Enhanced Fluorescence"
CFTCC Symposium, Boston University, May 20th, 2014.

(Chris D. Geddes) and J. Melendez

"Development of a Microwave-Accelerated Metal-Enhanced Fluorescence Assay for the Detection of Neisseria gonorrhea"
Seventh Annual Frontiers at the Chemistry-Biology Interphase Symposium, University of Maryland Baltimore, UMB, Baltimore, USA, May 20th 2014.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Theory and Diagnostic Applications"
Du Pont, Wilmington, Delaware, USA, March 27, 2014.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon Fluorophore Description"
Drexel University, Drexel, Philadelphia, March 14, 2013.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A look back on the last 10 years"

NIHs Mid Atlantic Meeting for the Regional Centers of Excellence, Turf Valley Conference center, MD, USA, December 16, 2013.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence"

Portland State University, Portland, Oregon, December 16, 2013.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon Fluorophore Description"

Dow Chemicals, MI, USA, May 7, 2013.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon-Fluorophore Description"

NanYang Technical University, Singapore, Asia, January 17, 2013.

(Chris D. Geddes)

"Multiplexed Pathogen detection"

NIH's Mid Atlantic Regional Center's for excellence for Biodefense and emerging infectious diseases annual meeting, Airlee House, VA, USA, December 18, 2012.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Ultra-fast and Ultra Sensitive Multiplexed Pathogen Detection"

Porton Down, DSTL, UK, December 13, 2012.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon Fluorophore Description"

Fluorofest 2012, Bethesda, Washington DC, August 1-3, 2012.

(Chris D. Geddes)

"Ultra Fast and Sensitive Assay Platform for CT and GC"

NIH / NIBIB point of Care Technologies Research Network, Johns Hopkins University, Baltimore, MD, June 12th 2012.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon Fluorophore Description"

ACS MARM Meeting, UMBC, Baltimore, June 2nd 2012.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Progress towards a Unified Plasmon-Fluorophore Description"

Penn State University, November 16th, 2011.

(Chris D. Geddes)

"A Multi-Analyte and Flexible Platform Technology - Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF)"

NIH, NIAID/NIBIB SMMart Bioworkers workshop, NIH, Bethesda, MD, June 27th 2011.

(*Johan Melendez*) and Chris D. Geddes

"Development of a Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) as a point of care assay for the detection of *Neisseria Gonorrhoeae*"

NIH NIBIB 2011 POCTRN International Symposium for commercialization, US Davis Medical Center, Sacramento, CA, June 24th, 2011.

(*Chris D. Geddes*)

"Multiplexed Ultra Fast and Sensitive Bioagent and Clinical Assays"

NIH NIBIB POCTRN meeting, UC Davis, Sacramento, CA, June 23rd 2011.

(*Chris D. Geddes*)

"Multiplexed Ultrafast and Sensitive Bioagent Assays"

Mid-Atlantic Regional Center of Excellence for Bioagents and Emerging infectious Diseases annual conference, Mt Washington, Johns Hopkins University, Baltimore, June 14th, 2011.

Feng C, Whitford M, Dragan A, Geddes C, Stamatou N, Zhang L, Medvedev A, Cole L, Vogel SN, and (Cross A)

"Sialyl residues modulate LPS-mediated signaling through the Toll-like receptor 4 complex"

Gordon Conference on Glycobiology, Lucca, Italy May 8-13, 2011.

(*Chris D. Geddes*)

"30 Second Point of Care Diagnostics"

NIH, NIBIB, Washington DC, March 23rd, 2011.

(*Chris D. Geddes*)

"Multiplexed 30-second Diagnostics"

NIH MARCE Meeting, Philadelphia, November 15, 16th, 2010.

(*Chris D. Geddes*)

"Metal-Enhanced Fluorescence: A paradigm Shift in the way we both think and use Fluorescence Spectroscopy today"

Physics Department, UMBC, November 10th, 2010.

(*Chris D. Geddes*)

"Metal-Enhanced Fluorescence: A paradigm Shift in the way we both think and use Fluorescence Spectroscopy today"

Johns Hopkins University, Homewood Campus, Baltimore, October 14th, 2010.

(*Chris D. Geddes*)

"UMBC's Institute of Fluorescence"

University of Maryland Baltimore County (UMBC), Presentation to the Academic affairs group, June 10th 2010.

(*Chris D. Geddes*)

"Multiplexed Ultra-fast and Sensitive Bioagent assays"

NIH (NIAID) / MARCE annual Spring meeting, Turf Valley resort. Maryland, June 2nd, 2010.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"
UMBC external advisory board, UMBC BioPark, May 24th, 2010.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"
Amgen, Thousand Oaks, May 14th, 2010.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"
Agilent technologies / HP, San Jose, CA, May 13th, 2010.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"
Life technologies (Invitrogen), Foster City, CA, May 13th, 2010.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"
Qiagen visit to the IoF, May 3rd, 2010.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence (MEF) based Ultra fast and Ultra sensitive multiplexed pathogen sensing"
6th National RCE meeting, Las Vegas, April 13th 2010.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"
Martek, Maryland, USA, April 8th, 2010.

(Chris D. Geddes)

"Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) based detection of Chlamydia"
NIH (NIBIB) PoC JHU U54 center review, CNN conference center, Atlanta, March 8th 2010.

(Chris D. Geddes)

"Advanced Fluorescence Methodologies for Protein Detection, Quantification and Structural Determination"
WCBP CMC Strategy forum and FDA Panel, January 24th 2010, Washington D.C.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A paradigm shift in Fluorescence Spectroscopy",
Chemistry Dept., University of Southern Illinois, Carbondale, Dec. 4th, 2009.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence (MEF): Progress towards a Unified Plasmon-Fluorophore Description"
Research Triangle International (RTI), Raleigh/Durham, North Carolina, USA, Dec. 2nd, 2009.

(*Chris D. Geddes*)

“Metal-Enhanced Fluorescence (MEF): Progress towards a Unified Plasmon-Fluorophore Description”
Chemistry Dept., University of Maryland Baltimore County, Maryland, USA, November 24th, 2009.

(*Chris D. Geddes*)

“Multiplexed Ultra Fast and Sensitive Bioagent Assays”
Mid Atlantic Regional Centre of Excellence (MARCE), Turf Valley, MD, November 9th 2009.

(*Chris D. Geddes*)

“Research at the Institute of Fluorescence”,
Chemistry Dept., University of Maryland Baltimore County, Maryland, USA, August 11th, 2009.

(*Chris D. Geddes*)

“Metal-Enhanced Fluorescence: A Paradigm Shift in the way we both use and think about Fluorescence”
Evergreen Capital, COMB Building, UMBI, May 4th 2009.

(*Chris D. Geddes*)

“Micro-Accelerated Metal-Enhanced Fluorescence Detection of Chlamydia Trachomatis”
Johns Hopkins University, Department of Infectious diseases, POCTRN Meeting, March 31st, 2009.

(*Chris D. Geddes*)

“NIBIB NIH POCTRN Private Public Partnership: MAMEF Technology”
Johns Hopkins University, Department of Infectious diseases, POCTRN Meeting, March 31st.

(*Chris D. Geddes*)

“Metal-Enhanced Fluorescence: Ultra Sensitive and Rapid Diagnostics”
Caliper Life Sciences, COMB Building, UMBI, March 26th 2009.

(*Chris D. Geddes*)

“Bioagent and Virus single copy Multiplexed assays in < 30 seconds”
MARCE Annual meeting, Turf Valley, MD, USA, March 24th, 2009.

(*Chris D. Geddes*)

“Metal-Enhanced Fluorescence: Ultra Sensitive and Rapid Diagnostics”
Clean Water panel initiative, College Park, MD, USA, February 26th 2009.

Chris D. Geddes and (*Kadir Aslan*)

“Microwave-Accelerated Metal-Enhanced Fluorescence Detection of STDs”
Johns Hopkins University, Department of Infectious diseases, February 25th, 2009.

(*Chris D. Geddes*)

“Metal-Enhanced Fluorescence: Ultra Fast and Sensitive Diagnostics” Chris D. Geddes[#]
DTRA, Defence Threat Reduction Agency, DTRA, Virginia, February 13th 2009.

Kadir Aslan and (*Chris D. Geddes*)

“STD detection in less than 1 minute”,
Johns Hopkins University, Department of Infectious diseases, December 12th, 2008.

(Chris D. Geddes)

"Plasmonic Nanohole arrays for Multiplexed sensing",
Bio Rad, Hercules, California, November 17th 2008.

(Chris D. Geddes)

"Anthrax detection in < 20 seconds using metal-enhanced Fluorescence and focused Microwaves"
US Navy (Naval Medical Research Facility), Washington DC, October 3rd, 2008.

(Chris D. Geddes)

"Metal-enhanced Fluorescence: A change in the way we both use and think about fluorescence spectroscopy"
MBC, July 30th 2008, to the National Physics Laboratory (NPL), Laurel, Maryland.

(Chris D. Geddes)

"Metal-enhanced Fluorescence: A change in the way we both use and think about fluorescence spectroscopy"
Center for Marine Biotechnology, University of Maryland Biotechnology Institute, July 23rd 2008.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence",
MBC Talk, Mower and Hall lecture, June 24th, 2008.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: A Paradigm shift in the way we both think and use Fluorescence"
UMBI Retreat, June 14th 2008.

(Chris D. Geddes)

"Metal-enhanced Fluorescence: A paradigm shift in the way we use Fluorescence"
Medical Biotechnology Annual Retreat, Mount Washington, Maryland, April 17th 2008.

(Chris D. Geddes)

"Metal-enhanced Fluorescence: A paradigm shift in the way we both think and use Fluorescence"
Dept. of Epidemiology, University of Maryland school of Medicine, Baltimore, Maryland, April 4th 2008:

(Chris D. Geddes)

"Metal-enhanced Fluorescence",
Medical Biotechnology Center, UMBI, Baltimore, Maryland, USA, January 10th 2008 - (presented to NIST assistant director and director)

(Chris D. Geddes)

"Microwave-Accelerated Metal-Enhanced Fluorescence"
CARB II, University of Maryland Biotechnology Institute, Shady Grove, Maryland, November 19th 2007.

(Chris D. Geddes)

"Microwave-accelerated plasmonics"
Chemistry Department, Portland State University, October 12th, 2007.

(Chris D. Geddes)

"Microwave Accelerated Plasmonics: Application to Ultra fast and Ultra Sensitive Clinical Assays," SPIE, January 23, 2007, San Jose, California.

(Chris D. Geddes)

"Microwave Accelerated Metal-Enhanced Fluorescence"
Biotech Inc, VA, USA, July 19TH, 2007.

(Chris D. Geddes)

"Ultra-Fast and Ultra-Sensitive Small Volume Assays: Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) and Chemiluminescence (MT-MEC)," and "Plasmon-Controlled Fluorescence: A Paradigm Shift in Fluorescence and its Applications" (2 talks).
Bio-Rad, Hercules, CA, March 20, 2007.

(Chris D. Geddes)

"Microwave Accelerated Plasmonics,"
Medimmune, MD, USA, July 9TH, 2007.

(Chris D. Geddes)

"Anthrax Detection in 30 Seconds,"
Mid-Atlantic Regional Center of Excellence, Johns Hopkins University, Baltimore, March 22, 2007.

(Chris D. Geddes)

"Ultra-Fast and Ultra-Sensitive Small Volume Assays: Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) and Chemiluminescence (MT-MEC)"
US Army, Aberdeen Proving Ground, Aberdeen, MD, March 26, 2007.

(Chris D. Geddes)

"Ultra fast and sensitive DNA and protein detection using Microwave accelerated Metal-enhanced fluorescence"
Applied Physics Labs, Johns Hopkins University, September 14th 2006.

(Chris D. Geddes)

"Metal-enhanced Fluorescence: Anthrax Detection in Clinical Samples in 30 Seconds"
Johns Hopkins University, Baltimore, MD, for the MARCE, September 27th, 2006.

(Chris D. Geddes)

"Anthrax detection in clinical samples in 30 seconds"
Middle Atlantic Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research (MARCE), Turf Valley Resort and Conference Center, Ellicott City, Maryland, June 7th, 2006.

(Chris D. Geddes)

"Metal-Enhanced Fluorescence: Ultra Fast and Ultra Sensitive Detection Technologies"
Drexel University College of Medicine, Philadelphia, PA, May 23rd, 2006.

(Chris D. Geddes)

“Metal-enhanced Fluorescence: Ultra fast and ultra sensitive bioagent detection technologies”

Johns Hopkins University, Division of Infectious Diseases, Medicine, Baltimore, Maryland, May 15th 2006.

(Chris D. Geddes)

“Fluorescence Nanobiotechnology: Exciting Clinical Applications”

Upper Chesapeake Hospital and health Center, Bel-AIR, Maryland, May 10th 2006. (Presentation was also live-fed to several other Maryland Hospitals).

(Chris D. Geddes)

“Ultra Fast and Bright Assays using Plasmonics”

Medical Biotechnology Centre (UMBI) Annual Retreat, Turf Valley Resort and Conference Center, Ellicott City, Maryland, April 5th, 2006.

(Chris D. Geddes)

“Metal-enhanced Fluorescence: An emerging tool in biotechnology”

Department of Chemistry, University of South Florida, Tampa, Florida, USA, April 18th 2005.

(Chris D. Geddes)

“Metal-enhanced Fluorescence: An emerging tool in biotechnology”

Department of Chemistry, University of Central Florida, Orlando, Florida, USA, April 15th 2005.

(Chris D. Geddes)

“Metal-enhanced fluorescence: A technology to enhance fluorescence signatures 1 million-fold”

UMBI entrepreneur day, CARB, UMBI, DC, Maryland, July 21st 2005.

(Chris D. Geddes)

“A glucose sensing contact lens”

Department of Biochemistry and Molecular Biology, University of Maryland School of Medicine, Baltimore, MD, USA, October 25th, 2004.

(Chris D. Geddes)

“Advanced sensing concepts”

MBC / UMBI, October 15th 2004.

(Chris D. Geddes)

“A glucose sensing contact lens”

MBC / UMBI Annual Retreat, April 23rd 2004.

(K. Gryczynski) J. Malicka, I. Gryczynski, J. Lukomska, J. Huang, C. D. Geddes, K. Aslan, and J. R. Lakowicz

“MEF: A novel approach to ultrasensitive biomedical diagnostics”

SPIE, San Jose, CA, 25th Jan, 2004.

(*Jian Zhang*), Chris D. Geddes and Joseph R. Lakowicz

“Competitive coupling of polysaccharide and glucose with boronic acid capped on silver nanoparticles”
SPIE, San Jose, CA, 25th Jan, 2004.

(*Henryk Szmajski*), Vincent J. Pugh, Wayne E. Moore and Chris D. Geddes

“Enhanced chemical fluorescence-based sensing”
SPIE, San Jose, CA, 26th Jan, 2004.

(*Kadir Aslan*), Joseph R. Lakowicz and Chris D. Geddes

“3-D Plasmonic sensing platforms”

Department of Biochemistry and Molecular Biology, University of Maryland School of Medicine, Maryland, USA, October 6th, 2003.

(*Chris D. Geddes*)

“Glucose sensing: A successful project with CIBA Vision”
CIBA Vision, Des Plaines, Chicago, USA, July 18th, 2003.

(*Chris D. Geddes*)

“Glucose sensing using boronic acid probes in a contact lens”
CIBA Vision, Atlanta, Georgia, April 18th, 2003.

(*Chris D. Geddes*)

“Radiative-Decay engineering”
CIBA Vision, Atlanta, Georgia, April 18th, 2003.

(*Chris D. Geddes*)

“Metal-enhanced Fluorescence: Applications to medical imaging, diagnostics and the analytical sciences”

Department of Biochemistry and Molecular Biology, University of Maryland School of Medicine, Maryland, USA, March 2003.

(*Chris D. Geddes*)

“Metal-enhanced Fluorescence”

Medical Biotechnology Centre, University of Maryland Biotechnology Institute, Annual Retreat, September 2002.

(*Chris D. Geddes*)

“Radiative Decay Engineering”

The Center for Fluorescence Spectroscopy Annual Course, March 2002.

(*Chris D. Geddes*) and David J. S. Birch

“Study of nanometre size particles in silica sols using fluorescence depolarisation”

The Royal Society of Chemistry 1999 Annual Conference, Heriot-Watt University, 6-10 September, 1999.

(*Chris D. Geddes*)

"Playing on the beach - From sand and water to Silica

Dept. of Physics and Applied Physics colloquium, University of Strathclyde, 14 - 4 - 99.

(*Chris D. Geddes*)

"Bangs and Flashes 1993, 1994 & 1995"

Departmental open day lectures, Chemistry Dept, University of Wales, Swansea, UK.

Webinars

(*Presenting author*)

(*Chris D. Geddes*)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"

Presented to *Haris and Haris*, June 4th 2010.

(*Chris D. Geddes*)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"

Presented to *Life technologies*, CA, May 20th, 2010.

(*Chris D. Geddes*)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"

Presented to *Perkin and Elmer*, Canada, May 5th, 2010.

(*Chris D. Geddes*)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"

Presented to *Telegraph Hill Partners*, CA, April 20th, 2010.

(*Chris D. Geddes*)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"

Presented to *Qiagen*, March 18th, 2010.

(*Chris D. Geddes*)

"Metal-Enhanced Fluorescence: A paradigm shift in the way we both use and think about fluorescence"

Presented to *Amgen*, CA, February 2nd, 2010.

Conferences Organized / Chaired

"Bio-X Israel 2019"

Israel, Dead Sea, March 2-5th, 2019.

International Organizing Committee

"Bio-X Asia 2018"

Singapore, Asia, February 21-24, 2018.

International Organizing Committee

"Bio-X Israel 2017"

Netanya, Israel, June 4-8th 2017.

International Organizing Committee

“Bio-X Israel 2015”

Negev, May 27-June 1 2015

International Organizing Committee

“NanoSensorPhotonics 2013 – Bio-X”

Elat, Israel, Feb 8-14, 2013.

International Organizing Committee

“Fluorofest 2012”

Round Table Panel for Audience questions

Bethesda, Washington DC, August 1-3, 2012.

“ACS MARM Meeting”

Nanochemistry B – Chaired session

UMBC, Baltimore, June 2nd 2012.

“E-MRS Conference: Plasmonics”

Chaired a session

Strasbourg, France, May 16th 2012.

“Plasmonics in Biology and Medicine III”

Program Committee member

Bios 2006, Photonics West, January 23-24th 2006, San Jose, CA, USA. (Conference 6099)

“Advanced Biomedical and Clinical Diagnostic Systems V1”

Program Committee member.

SPIE, Photonics West, San Jose, CA, USA, Jan 20-21st, 2008

“Plasmonics in Biology and Medicine V”

Program Committee member.

SPIE, Photonics West, San Jose, CA, USA, Jan 20-21st, 2008

Press Releases / TV Interviews for Dr. Geddes’ Research

(many available on IoF website <http://theinstituteoffluorescence.com/>)

Chris D. Geddes

Professor Geddes gives interview with the American Society for Biochemistry and Molecular Biology on “How Professors can be Entrepreneurs from a University setting”
September 30th, 2018.

Chris D. Geddes

IoF research on STD’s featured in the Baltimore Sun,
September 18th, 2018.

Chris D. Geddes

Professor Geddes gives international address at the Ophthalmic Innovation Summit in Los Angeles, May 4th 2017.

OIS TV, May 4th, 2017.

See TV: <https://www.youtube.com/watch?v=run5K4SKilQ&t=32s>

Chris D. Geddes

Professor Geddes discusses the LacriPen on OIS TV,

OIS TV, March 6th, 2017.

<https://youtu.be/UQAIttKZPJY>

Chris D. Geddes

Dr Geddes gives interview about the development of the LacriPen

OIS TV, November 14, 2016.

Chris D. Geddes

Dr Geddes spoke to OIS TV about the LacriPen ophthalmic device

OIS TV, May 26, 2016.

Chris D. Geddes

Professor Geddes speaks to and is quoted in the New York times on "Aggregation Induced Emission" fluorescent molecules.

Newspaper, New York Times. February 17, 2016.

Chris D. Geddes

Dr Geddes' clinical STD assay was featured on the front page of the Baltimore Sun

Newspaper, Baltimore Sun, January 31, 2016.

Chris D. Geddes

Dr Geddes' 1800 patient clinical trial was reviewed in the Daily Record

Newspaper, Daily Record, December 28, 2015.

Chris D. Geddes

"IoF develops an Ultra Fast and Ultra Sensitive Salmonella test using the IoFs Microwave-Accelerated Metal-Enhanced Fluorescence (MAMEF) technology".

UMBC Talking heads, January 10th 2011.

Chris D. Geddes

Professor Geddes discusses the "IoFs high-tech quest for green energy" in the Catonsville Times,

April 6th 2011.

Chris D. Geddes

"IoF transfers within the University of Maryland System from UMBI to UMBC"

June 21 st 2010.

<http://www.theinstituteoffluorescence.com/press/Iof%20press%20release%20on%20transfer%20to%20UMBC.htm>

Chris D. Geddes

"IoF and other former UMBI centers strategically align with other USM campuses"

July 1st 2010.

<http://www.theinstituteoffluorescence.com/press/USM%20Transfer%20of%20IoF.pdf>

Chris D. Geddes

"Professor Geddes and IoF named Innovators of the Year 2010"

August 20th 2010, Award ceremony Oct 21st 2010.

Chris D. Geddes

"IoF featured in UMBCs Retriever weekly"

September 21st 2010.

Chris D. Geddes

"IoF described as Phenomenal Scientists in UMBIs annual report"

January 2009.

Chris D. Geddes

"IoF highlighted in the Daily Records' (Baltimore, USA) Biotech report Daily Record"

February 2009.

Chris D. Geddes

"IoF develops a 20 second Chlamydia test with Johns Hopkins University"

Press release from ISSTD (Medscape), July 2009.

Chris D. Geddes

"Students Light up Baltimore"

Baltimore Jewish Times, September 4th, 2009.

Chris D. Geddes

"Metal-Enhanced Fluorescence Could Aid Photodynamic Therapy"

Biophotonics International, May 2008.

Chris D. Geddes

"Anthrax detection in 20 seconds"

WJZ Channel 13 news, Baltimore, June 11th 2008.

Chris D. Geddes

"Professor Chris D. Geddes named amongst Maryland's Top Technology Innovators"

Daily Record, August 2008.

Chris D. Geddes

"Heating up Chemiluminescence Experiments"

Biophotonics International, pg 18, September 2007.

Chris D. Geddes

“Plasmon Resonance Boosts Output of Chemiluminescence”
Analytical Chemistry, Jan 1st, 2007.

Chris D. Geddes

“Biotechnology”, Chris D. Geddes and Joseph R. Lakowicz, Voice of America Radio Talk Show, February 2nd, 2006.

Chris D. Geddes and Kadir Aslan

“Microwaves + Nanoparticles = Ultra fast, Ultra sensitive Assays”
National Cancer Institute website, NCI Alliance for Nanotechnology in Cancer, January 17th 2006,
http://nano.cancer.gov/news_center/nanotech_news_2006-01-17b.asp

Chris D. Geddes

“Microwave-Accelerated Metal-Enhanced Fluorescence”
Baltimore, WBAL TV 11 News, January 23rd 2006.

Chris D. Geddes

“Metal-enhanced Fluorescence Test for Heart Attacks”
MBC/ UMBI Press releases, January 2006, <http://www.umbi.umd.edu/~mbc/index.htm>.

Chris D. Geddes

“Detecting Heart Attack in a matter of Seconds”
Baltimore Sun, Baltimore, USA, Friday 20th January, 2006, Health and Science Section, Pgs 1d and 4d.

Chris D. Geddes

“A Touch of Genius”
Aegis Newspaper, Maryland, March 8th, 2006.

Chris D. Geddes

“Non-Invasive Glucose Monitoring”
Kens Channel 5, News on Demand” Texas, USA, 2006.

Chris D. Geddes

“In the eye of the Beholder”
Contact Lens Magazine, Australia, pgs 46-47, 2006, written by reporter James Diamond.

Chris D. Geddes

“Microwaves make brighter and faster fluorescence assays”
Biophotonics International, February 2006.

Chris D. Geddes

“Chemiluminescence gets a boost from Microwaves”
Biophotonics International, December 2006.

Chris D. Geddes

“New Glucose Monitoring Device”

Discovery Channel, aired May 2005. (See IoF website for video)

Chris D. Geddes

“Keeping an eye on diabetes”

Chemical Science, June 2004, Vol 1, Issue 6, ISSN1478-6524

Chris D. Geddes

“Smart Contact lenses”

Nature Materials, 3, 76, 2004.

Chris D. Geddes, Ramachandram Badugu and Joseph R. Lakowicz

“Scientists Develop New Glucose Monitoring Procedures”

http://www.umbi.umd.edu/nande/news/120704_ged.html

Chris D. Geddes

“Increased Sensitivity Fluorescence Detection using Metallic Nanoparticles”

Pharmagenomics, 2003.

University of Maryland Biotechnology Institute (UMBI) Press Stories

View articles on IoF Website

“Dr Chris D. Geddes Hosts Site Visit at the Institute of Fluorescence”

3-6-2009.

“Institute of Fluorescence receives grant for MEF-based clinical testing”

3-18-2009.

“Delegate Jon Cardin Tours IoF facilities”

5-5-2009

“Dr Geddes publishes latest edition of fluorescence directory”

6-29-2009

“Drs Aslan and Geddes publish Invited Article for Chemical Society Reviews”

8-11-2009.

“UMBI announces formation of Plasmonix Inc., to commercialize Metal-Enhanced Fluorescence Technology,

8-19-2009.

“Dr Chris Geddes publishes article in Journal of Analytical Chemistry”

8-31-2009.

“Dr Geddes’s Plasmonics Journal gains impact number”

9-7-2009

“Dr Geddes publishes latest edition of reviews in Fluorescence”
9-16-2009

“Dr Chris Geddes presents Unified theory of Metal-Enhanced Fluorescence at Conference in Hungary”
10-30-2009

“Dr Geddes organizes Journal of Fluorescence Editorial Board Lunch”.
11-13-2009.

“Dr Geddes presents at MARCE Meeting”
12-14-2009.

“Chris Geddes honoured among Innovators of the Year for 2008”
UMBI, 10-28-2008.

“Dr Aslan and Dr Geddes publish Highlight Article”
12-2-2008.

Service to the Chemistry and Biochemistry Department at UMBC (not exhaustive list)

Committee Chair, Green and Sustainable Committee, Nov 2022 – Present.

Committee Member, Safety Committee, Aug. 2022, 2023, 2024, 2025 – Present.

Committee Member, URA/URCAD, Aug., 2022, 2023, 2024, 2025 – Present.

Co-Organizer, Regional Scientific Olympiad held at UMBC, Optics section – Jan 2025.

Committee Member, P and T for Dr Aaron Smith to Full Professor, Sept. – Dec. 2025.

Committee Member, P and T for Dr Joe Benette to Assoc. professor, Sept. – Dec. 2025.

Committee Member, 3rd year Review for Kamal Seneviratne, October – December 2024.

Committee Member, P and T for Dr Lisa Kelly to full Professor, Sept. December 2024.

Committee Member, P and T for Deepak Koirala to Assoc. professor, Sept. – Dec. 2024.

Co-Organizer, Regional Scientific Olympiad held at UMBC, Optics section – Jan 2024.

Committee Chair, Professional Development Committee, Sept., 2021 – August 2022.

Committee Member, University Arbitrary and Capricious Committee, Sept., 2021 – Aug. 2022.

Committee Member, START Review Committee, May 2021.

Committee Member, Graduate Progression and COVID-19 Committee, July 1st 2020 – August 2021.

Committee Member, P and T for Dr Aaron Smith, Sept. – Dec., 2021.

Committee Chair, Five Year Post Tenure Review for Dr Joel Liebman, Feb., - April 2021.

Committee Member: Pre-Professoriate Conversion to Assistant Professor, Nov., 2020.

Committee Member for Dr Minjoung Kyoung's Tenure Review, Fall 2020.

Committee Member for Tara Carpenter promotion, Fall 2020.

Committee Member: Bioimaging-track degree, Oct. – Dec 2020.

Committee Member: Biochemistry Hire Committee, January 2020 – May 2020.

Committee Member: Dr Marcin Ptaszek, 5 year post-tenure review, January – April 2020.

Committee Member for Dr Mark Allen's Tenure Review, Fall 2019.

Committee Chair, Five Year Post Tenure Review of Dr Jim Fishbein, May 2019.

Committee Member, Five Year Post-Tenure Review of Dr Michael Summers, April 2018.

Committee Member, Graduate Recruitment Committee, January 21, 2018 – August 2020.

This committee looks at the incoming applicants to the depts. both PHD and masters programs, interviews them and makes recommendations to the GPD and Chair. Chaired by Dr Ptaszek.

Committee Chair, Brian Cullum Full Professor Promotion Committee, August 1, 2017 - April 9, 2018.

I was the Dept. committee chair for Dr Cullum's Full Professor promotion consideration.

Committee Member, Faculty Search Committee (Analytical Chemistry), September 2017 – Jan 2018.

Committee Member, Emerging Research Faculty Search Committee, January 1, 2017 - December 31, 2017.

This committee was focused at hiring an Emerging faculty member for the new research track position created within the dept. Chaired by Dr Radtke.

Committee Member, Songon An, August 1, 2017 - November 30, 2017.

This committee reviewed Dr Songon An's packet for promotion to Associate Professor with Tenure.

Committee Chair, Graduate Career Committee, January 1, 2016 - January 31, 2017.

This committee helps our graduate students position themselves for post-graduation, whether it be employment or academia. We organize workshops, round tables as well as focused seminars, all with the goal of preparing our students for the next phase of their professional life.

Committee Chair, 3rd Year Tenure Review for Dr Minji Kyoung, August 1, 2016 - November 1, 2016.

Committee Member, Faculty Search Committee (Aaron Smith), January 1, 2016 - May 1, 2016.

Committee Member, Five Year Post-Tenure Review of Dr Joel Liebman, January 1, 2016 - March 29, 2016.

Committee Member, Five Year Post-Tenure Review of Dr Kathy Seley, January 1, 2016 - March 29, 2016.

Dept. Committee Member for Tenure Review of Dr Ian Thorpe, September-December 2015.

Dept. Committee Member for Tenure Review of Dr Ryan White, September-December 2015.

Committee Chair, Chem Dept retreat funding committee, February 2014 - March 2014.

At the chem.Biochem. dept retreat a committee looked at increasing funding for faculty members within the dept. Dr Geddes headed this committee and wrote a final report which was presented at the retreat and then later at a dept faculty meeting.

Committee Member, Inorganic Faculty Search committee, October 2011 - March 2012.

Teaching at UMBC

Fall 2025 – Chem 490/684, (Advanced Spectroscopy) – 5 enrolled

Spring 2025 - PChem 303, (Physical Chemistry for the BioChemistry / Lifesciences – 71 enrolled

Fall 2024 – Chem 351L (Organic Chemistry Lab) – 114 enrolled

Spring 2024 - PChem 303, (Physical Chemistry for the BioChemistry / Lifesciences) - 73 enrolled

Fall 2023 - Chem 490/684 (Quantum Chemistry and Spectroscopy) – 6 enrolled

Spring 2023 - PChem 303, (Physical Chemistry for the BioChemistry / Lifesciences) - 84 enrolled

Fall 2022 – Chem 467/667 (Analytical Chemistry) – New Course Created – 11 enrolled.

Spring 2022 - PChem 303, (Physical Chemistry for the BioChemistry / Lifesciences) - 110 enrolled

Fall 2021 - Chem 401/611 Chemical and Statistical Thermodynamics, - 2 enrolled

Spring 2021 - PChem 303, (Physical Chemistry for the BioChemistry / Lifesciences) - 71 enrolled

Fall 2020 – Chem 490/610 (Quantum Chemistry and Spectroscopy) – 7 enrolled

Spring 2020 – PChem 303, (Physical Chemistry for the BioChemistry / Lifesciences) - 92 enrolled

Fall 2019 – Chem 401 Chemical and Statistical Thermodynamics (New Course created) - 14 enrolled

Spring 2019 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences) - 90 enrolled.

Fall 2018 – Chem 490/610 (Quantum Chemistry and Spectroscopy) – 6 enrolled.

Spring 2018 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences) - 80 enrolled

Fall 2017 – Chem 690 / 714, (Ethics for the LifeSciences) – 14 enrolled

Spring 2017 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences) - 112 enrolled

Fall 2016 - Chem 690 / 714, (Ethics for the LifeSciences) – 7 enrolled

Spring 2016 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences) - 122 enrolled

Fall 2015 – Chem 684, Quantum Spectroscopy – 1 enrolled.

Spring 2015 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences) - 106 enrolled

Spring 2014 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences) - 109 enrolled

Spring 2013 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences) - 93 enrolled

Spring 2012 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences) – 98 enrolled

Fall 2010 - Chem 684, (Special Topics in Chemistry), Fluorescence Spectroscopy and Plasmonics

Spring 2011 - PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences)

Fall 2010 – Chem 684, (Special Topics in Chemistry), Fluorescence Spectroscopy and Plasmonics

Spring 2010 – PChem 303, (Physical Chemistry for the Biochemistry / LifeSciences)

Teaching *prior* to UMBC

October – December 2006, 10 * 3 hr class, Buffers, pH and Physiology, University of Maryland School of Medicine, Biochemistry and Molecular Biology Dept., UMAB.

April 15th 2005 - “Metal-enhanced Fluorescence: An emerging tool in biotechnology” ACS Biophotonics Seminar and Workshop, Department of Chemistry, University of Central Florida, Orlando, Florida, USA.

October – December 2005, 10 * 3 hr class, Buffers, pH and Physiology, University of Maryland School of Medicine, Biochemistry and Molecular Biology Dept., UMAB.

March 2004 – “Metal fluorophore Interactions” , annual CFS, NIH P41 fluorescence course.

October – December 2004, 10* 3 hr class, Buffers, pH and Physiology, University of Maryland School of Medicine, Biochemistry and Molecular Biology Dept., UMAB

March 2003 – “Metal fluorophore Interactions” , annual CFS, NIH P41 fluorescence course.

October – December 2003 , 10* 3 hr class, Buffers, pH and Physiology, University of Maryland School of Medicine, Biochemistry and Molecular Biology Dept., UMAB.

March 2002 – “Metal fluorophore Interactions” , annual CFS, NIH P41 fluorescence course.

October – December 2002 , 10 * 3 hr class, Buffers, pH and Physiology, University of Maryland School of Medicine, Biochemistry and Molecular Biology Dept, UMAB.

Service to the University

Director of the Institute of Fluorescence:

Dr Geddes is the director of UMBC’s Institute of Fluorescence, IoF. The IoF was founded in 2001 by Dr. Chris D. Geddes and it transferred to UMBC in 2010. Under the leadership of Dr. Chris D. Geddes, the IoF has earned a well-deserved international reputation for its advances in Fluorescence Spectroscopy and Plasmonics. Approaches and concepts both developed and discovered by the group, such as Metal-Enhanced Fluorescence (MEF), Metal-Enhanced Chemiluminescence (MEC), Surface-Plasmon Coupled Phenomenon, Fluorophore-Induced Plasmonic Current (FIPC) and the glucose-sensing contact lens, are both well-recognized, highly cited and currently used in laboratories around the world today.

Dr Geddes’ Patent Portfolio:

Dr Geddes has an expansive patent portfolio centred mostly around discoveries in Metal-Enhanced Fluorescence / chemiluminescence and surface plasmon coupled quanta phenomenon, with a handful of patents describing new fluorescent chemical sensors (molecules) / new transduction mechanisms as well as microwave-based lysing phenomenon. Dr Geddes spends a notable amount of time working with UMBC’s Office of Research and Development and UMBC’s assigned patent attorney regarding the portfolio’s patent prosecution and the licensing of technologies to industry. Greater than 75 % of Dr Geddes’s patent portfolio is licenced to industry today. On 12-3-2015, Professor Geddes

was awarded for “*technology innovation*” at UMBC's innovators luncheon by the USM chancellor, Dr Bob Caret.

Service to the Profession

NIH AND NSF Peer Review:

Dr Geddes has strong associations with the NIH. He was the chair of Cell Biology with Marcia Steinberg (Head of all NIH SRAs) for many years, and was more recently the chair of the Biophysics and Chemistry SBIR panel, also for many years (Sergei Rubinov SRA), more recently a permanent NIH member of the R01 study section EBT (2007-2011, Vonda Smith, SRA). In addition, Dr Geddes has close ties with the NIH NCRR and NIBIB, institutes who fund the National Resource Center P41 mechanisms. Dr Geddes has sat on several “site visit” p41 reviews, including at the oldest NIH P41 at Los Alamos, New Mexico. Dr Geddes sat on the NIBIB p41 site visit in Irvine California for Dr Enrico Gratton's, fluorescence p41 center renewal in 2008. Dr Geddes also participates with NSF panels in an ad hoc manner. The following is a non-exhaustive list of some of the study sections Dr Geddes has both *chaired* as well as *participated* as a regular and permanent NIH member.

Examples of NIH panels Dr Geddes participates as a Permanent NIH Member. (Not exhaustive)

EBIT – Oct 8-9th, 2010. (EBIT – Enabling Biotechnology and Imaging NIH R01 study section).
 EBT – Jan 27-28th 2010.
 EBT – June 11-12th 2009 (EBT = Enabling Biotechnologies, NIH R01 study section).
 EBT – Jan 29th, 2009.
 EBT – Jun 12th, 2008.
 EBT – Jan 31st, 2008.
 EBT – Oct 4th 2007.

Examples of NIH panels that Dr Geddes has Chaired (Not exhaustive)

ZRG1-SBIB-V(55) and SBIB-F(06), March 12, 2015 - March 13, 2015.
 Safe and Effective Instruments and Devices for use in Neonatal and Pediatric Care Settings, 12-3-13.
 ZRG1 BCMB-M 90 Special Topics in Chemistry – August 3-4th, 2010.
 ZRG1 BCMB-1 (10) (B) – March 13th 2008.
 ZRG1 BCMB-1 (10) B – July 13th 2007
 ZRG1 BCMB-1 (10) (B) – May 15th 2007.
 ZRG1 BCMB-1 (10) (B) – Nov 16th 2006.
 ZRG1 BCMB-M (10) (B) – July 13th 2006.
 ZRG1 BCMB-M (10) (B) – Nov 3rd, 2005.
 ZRG1 CB-A (10) (B) – Nov 2nd 2005.
 ZRG1 CB-A (10) (S) Mar 14th 2005.
 ZRG1 BCMB-M (10) (B) – March 10th 2005.
 ZRG1 SSS-1 (10) (B) – Nov 8th 2004.
 ZRG1 SSS-1 (11) – August 16th 2004.
 ZRG1 SSS-6 (10) (B) – July 8th 2004.
 ZRG1 SSS-U (10) (B) – June 14th 2004.

ZRG1 SSS-6 (10) (B) – Feb 26th 2004.
ZRG1 SSS-U (50) (B) – June 23rd 2003.
ZRG1 SSS-1 (10)(1) – June 22, 2003.
ZRG1 SSS-U (50) (1) – Feb 10th 2003.

Examples of NIH / NSF *Special Emphasis Study Section Panels* Dr Geddes has served on.

NIH Study Session, February 26, 2015 - February 27, 2015.
ZRG1 BCMB-M (90): Special Topics in Chemistry, Feb 23-24, 2011.
NIBIB ZEB1 OSR-B (J2) (S) – Dec 7th 2005.
ZRG1 CB-A (10) – June 13th 2005.
NIBIB ZEB1 OSR-C (M1) (R1) – Mar 15th 2005.
RNM – Feb 12th 2004.
NSF Review panel – March 24th 2003.

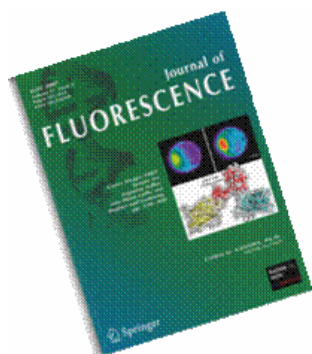
Service to the International Community

International Peer-Review Consultant for Springer:

Dr Geddes was a member of Springer's prestigious Scientific Advisory Board from 2003-2009 and more recently 2015 – 2020. As one of the members on the board, Dr Geddes was selected from ≈ 1750 Springer editor-in-chiefs from around the world to help address and advise on the changing policies and practices in academic scientific publishing. Challenges faced by the global publishers were addressed annually by the board and include topics such as: Open access, scientific copyright ownership, plagiarism, electronic publishing and content, and changes in NIH and NSF policies with regard to the federally funded research. In addition, Dr Geddes has introduced new practices and business models himself into scientific publishing, concepts such as advertisement funded journals (e.g. *who's who in fluorescence*) and free printed color journal figures from affinity program based revenue streams.

International Peer-Review: *The Journal of Fluorescence*:

Dr Geddes has been the editor-in-chief of the *Journal of Fluorescence* since October 2001, some 24 or so years. The *Journal of Fluorescence* is an international forum for peer-reviewed articles in Fluorescence Spectroscopy. The Journal is indexed on both Thompson ISI Web of Science, as well as the NIH's Medline. As the editor-in-chief, Dr Geddes is responsible for the overall running and peer-review of the Journal, budgets and future scientific direction & growth of the journal. Under Dr Geddes's leadership and tenure, the Journal has grown more than 300 % in impact factor, and over 500 % in Journal submissions. At any one time, the *Journal of Fluorescence* has > 200 articles at various stages of peer-review. Dr Geddes has introduced regional editors from around the world to address the significant growth of the journal, as well as free color figures and a streamlined electronic system for paper submission and tracking.



The Journal can be found at: <https://www.editorialmanager.com/jofl/>

Plasmonics (Journal):

Dr Chris D. Geddes is the founding editor-in-chief of Plasmonics, a Springer Journal launched in 2005. Plasmonics is an international forum for the publication of peer-reviewed leading-edge original articles that both advance and report our knowledge base and practice of the interactions of free-metal electrons, plasmons. Topics covered include notable advances in the theory, physics, and applications of surface plasmons in metals, to the rapidly emerging areas of nanotechnology, biophotonics, sensing, biochemistry and medicine. Topics, include the theory, synthesis and optical properties of noble metal nanostructures, patterned surfaces or materials, continuous or grated surfaces, devices, or wires for their multifarious applications. Plasmonics publishes leading edge peer-reviewed papers that describe new plasmonic based devices, new synthetic procedures for the preparation of nanostructures and their optical properties, as well their applications in analytical sensing and medicine.

Plasmonics has an international diverse editorial board with numerous regional editors representing all regions of the world.

Plasmonics' has been Dr Geddes's vision in light of his scientific achievements in this research area. It is important to emphasize that the launch of a new peer-reviewed journal is a most arduous task. The formation of plasmonics back in 2005 took over 2 years of planning and discussions with a significant financial investment from Springer (> \$100,000) and the backing of the plasmonics physics / chemistry community. Plasmonic's highest impact factor is 4.5.

Plasmonics can be found at: <https://www.editorialmanager.com/plas/>

Advanced Metamaterials: (A new peer reviewed journal launched in 2025 by Springer / Nature)

In the spring of 2025, Dr Geddes launched Advanced Metamaterials, as the founding editor-in-chief, the second peer reviewed journal he has launched in his career.

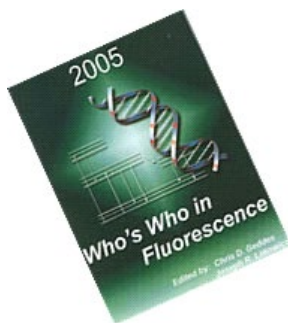
Advanced Metamaterials is an Open Access journal which publishes broadly on the topic of metamaterials, which are receiving a great deal of attention worldwide for their wide variety of applications and boasting a large degree of multifunctionality. Similar to the plasmonics journal, Advanced Metamaterials boasts a diverse international advisory board.

Advanced Metamaterials can be found at: <https://link.springer.com/journal/44468>

Annual Reviews in Fluorescence and Annual Reviews in Plasmonics:

Dr Geddes is the founding editor-in-chief of both the Reviews in Fluorescence (RIF), and Reviews in Plasmonics (RiP) annual hard bound book serials. The RIF and RiP serve as comprehensive collections of trends and emerging hot topics in the fields of both Fluorescence and Plasmonics respectively. Both volumes summarized the respective year's progress in the respective fields, with authoritative analytical reviews, specialized enough to be attractive to professional researchers, yet also appealing to the wider audience of scientists in related disciplines of Fluorescence and Plasmonics. To date a great many yearly volumes have been published with invited chapters from authors all over the world. The volume is readily available on Amazon.com as well as other internet book sites. Both series ran and published annual hard bound books from 2003 → 2023.

The Who's Who in Fluorescence Annual Volume:

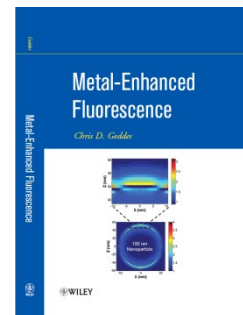


Dr Geddes was the Founding Editor-in-chief of the world renown “Who’s who in Fluorescence annual volume” (WWIF). With over 50,000 copies both sold and disseminated around the world to date, the WWIF served as a comprehensive archive of fluorescence workers interests, contact details and specialty keywords. Entry into the volume was selected by Dr Geddes and his staff and is dependent on academic achievements, such as publications etc, in the research areas of fluorescence and biomedical sensing. Dr Geddes also introduced a new personal publication statistic into the volume. Similar to Thompson ISI journal impact numbers, Dr Geddes’s AIM number (Author Impact Measure) calculated author’s individual publication statistics for any given year.

The volume ran from 2003 → 2009.

Topics in Fluorescence Spectroscopy:

Dr Geddes was also the Co-Editor, of the popular book series “Topics in Fluorescence Spectroscopy”. 11 books were published in this edited volume series with contributions from many authors from around the world. The volume is available on both Amazon.com as well as directly from Springer/Nature. The series ran until 2023.



Metal-Enhanced Fluorescence Volumes:

Dr Geddes has published two volumes dealing with Metal-Enhanced Fluorescence, a term he first coined in the peer-reviewed research literature in his seminal paper back in 2002. The first volume, published by Wiley, NJ, in 2010 was called “Metal-enhanced Fluorescence”, the second “Surface Plasmon Enhanced, Coupled and Controlled Fluorescence” was published in 2017.

Expert Witness and Fluorescence Consultant:

Dr Geddes has been an expert witness in several fluorescence-based technology litigations and is very frequently a consultant for industry in the fields of fluorescence, plasmonics and bio-agent / clinical detection. This list is confidential, but can be seen on Dr Geddes’ UMBC bi-annual consultancy disclosure reports.

Scientific Advisory Board / Board of Directors:

Dr Geddes has sat on the scientific advisory board of the National Flow Cytometry Resource center at Los Alamos, New Mexico, 2004-2007.

Plasmonix LLC, Scientific Advisory Board, 2009 – 2013

Plasmonix LLC, Board of Directors, 2013-2014.

Other Service to the Community

Board Member, JHU Applied Physics Lab - Technology Transfer, (January 1, 2016 - 2022).

Dr Geddes helped JHU APL in Laurel, review technology for future commercialization or patenting.

Baltimore Angels Investment Group – Dr Geddes is a Baltimore Angel. He invests in early to mid-stage companies and helps them build enterprise value before an exit.

Major International Conference's Organized

Associate Chair, International Steering Committee for the Bio-X Conference Series, (January 1, 2008 - Present), annually every year.

Bio-X is an international Annual Conference series held around the world. Dr Geddes is one of the original conference series founders back in 2008 and serves on the international steering committee today.

Journal Peer review:

Dr Geddes frequently both reviews and is invited to review articles for a great many journals. Dr Geddes accepts perhaps 10 % of all the requests made of him, due to the sheer volume of weekly requests. Example Journals reviewed for include (not exhaustive):

PNAS, JACS, Analytical Chemistry, Nature, Science, Journal of physical Chemistry A, B, C, Journal of Physics A-D, Physics Review Letters, Applied Physics Letters, Chemical Physics Letters, Journal of Applied Physics, Journal of Immunological Methods, Applied Spectroscopy, Journal of Luminescence, Measurement Science and Technology, Analytical Biochemistry, Biochemical and Biophysical Research Letters, Talanta, Analytical Bioanalytical Chemistry, Current Opinions in Biotechnology, Bioorganic and Medicinal Chemistry etc.

Trade Show Exhibits:

(Chris D. Geddes)

Lyse-It LLC

American Society of Microbiology, Atlanta, USA, June 7-11th 2018, Booth #3005.

(Chris D. Geddes)

Lyse-It LLC

American Society of Microbiology, Baltimore, February 11, 2018.

(Chris D. Geddes)

Lyse-It LLC

6th Annual Conference on Microbiology, Baltimore, USA, October 16-18th 2017. Booth #12

Commercial Spin Out Company “Plasmonix Inc”

In 2009 Dr Geddes and UMBI/UMBC spun out Plasmonix Inc., a Maryland based biotechnology company, (a Delaware-based C-Corp) to commercialize Dr Geddes' patent portfolio on Metal-enhanced Fluorescence / luminescence technologies.

Plasmonix's focus was centred on the enhancement of luminescent signals through advanced use of metal nanoparticles and application of its technology to the life sciences and diagnostic assays. Commercialization of other consumer and industrial applications, including cosmetics, apparel, paints, lighting, solar and communications, was also approached through partnerships and collaborations.

The fundamental phenomenon behind Metal Enhanced Luminescence is the discovery that luminescent entities brought within 10 to 30 nanometers of certain metal nanoparticles significantly boost luminescent signal strength. Plasmonix's products boosted signal strength from 10 to 1000 times. This led itself to the development of a broad range of products aimed at life science and diagnostic opportunities where Plasmonix delivered assay and clinical diagnostic products that are, correspondingly, 10 to 1000 times more sensitive.

Plasmonix inc. was located in UMBC's south campus Bio-park generating revenue for UMBC and employed 6 people. With the help of Dr Geddes, Plasmonix secured in excess of \$5,000,000 for research and product launch. In 2015 Plasmonix's assets / products and patents were acquired, and are now successfully commercialized by others.

Commercial Spin Out Company “Lyse-It” LLC

In 2016 Dr Geddes and UMBC launched another spin out company, namely “Lyse-It LLC” (www.Lyse-It.com), based on a suite of patents and intellectual property that came from Dr Geddes' Institute of Fluorescence. Lyse-It® is a Maryland-based Biotechnology company that offers a means to lyse any cell, spore or virus rapidly (typically < 30 seconds) in a single-step on a single platform, thereby enabling the genetic material (e.g. DNA/RNA) to be collected for downstream analysis on any platform, such as PCR, qPCR and NAAT tests. A significant advantage of the Lyse-It® technology is that in addition to Cell lysing, DNA / RNA fragmentation occurs simultaneously, readying your lysate for immediate analysis and removing the need for a second DNA / RNA fragmentation step. In addition, DNase's and RNase's are inactivated during the process, allowing for maximum DNA/RNA recovery. Lyse-It® currently employs several people and has managed to grab market share in this global \$18 billion business, aiding both Maryland and UMBC in its economic and technology dissemination goals. Dr Geddes has secured ~ \$500,000 in funding for Lyse-It® to date.

The attached Curriculum Vitae is complete and accurate



10-1-2025