

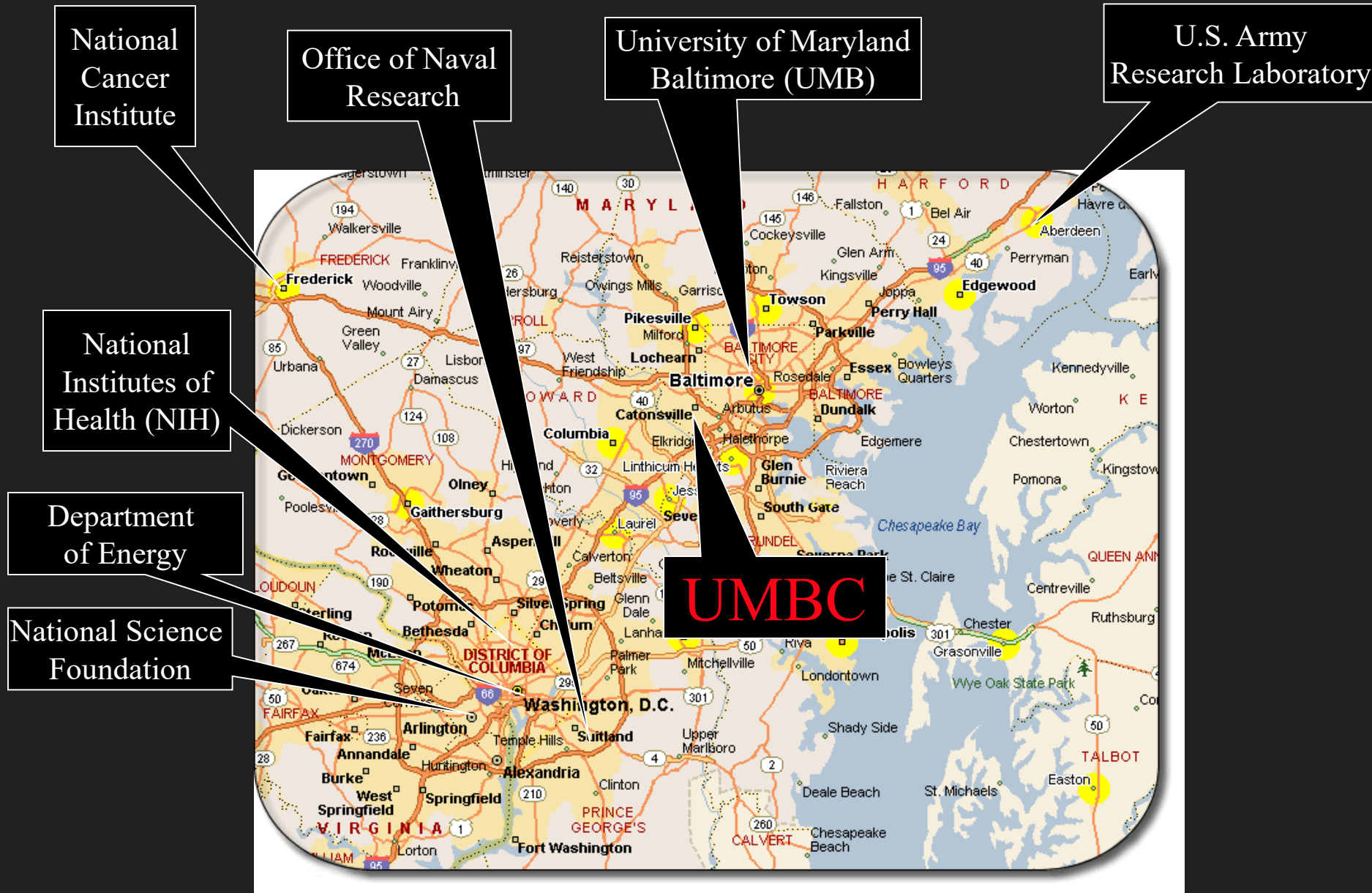


UMBC Department of Chemistry and Biochemistry Graduate Open House (Part I)

Welcome

Fall 2020

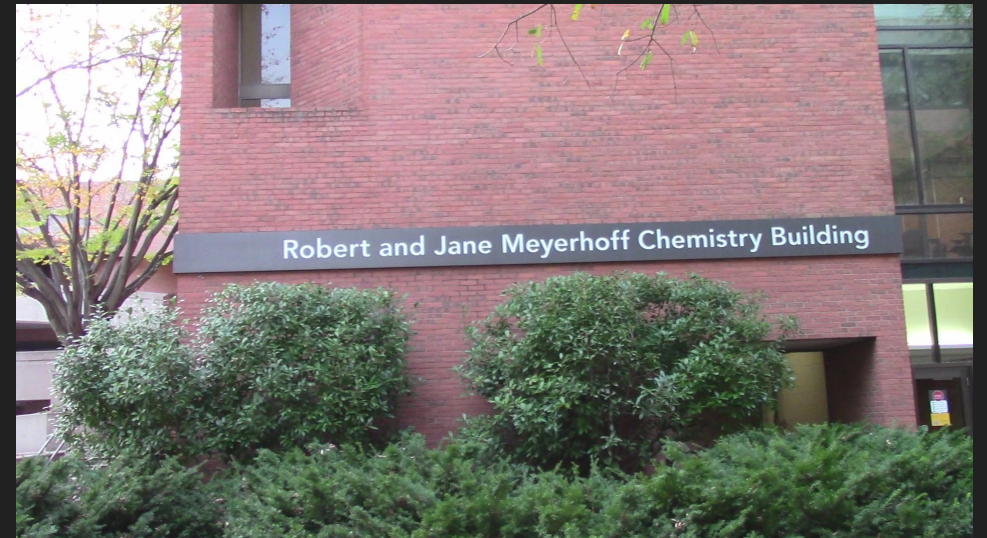
Where We Are?



Who We Are?

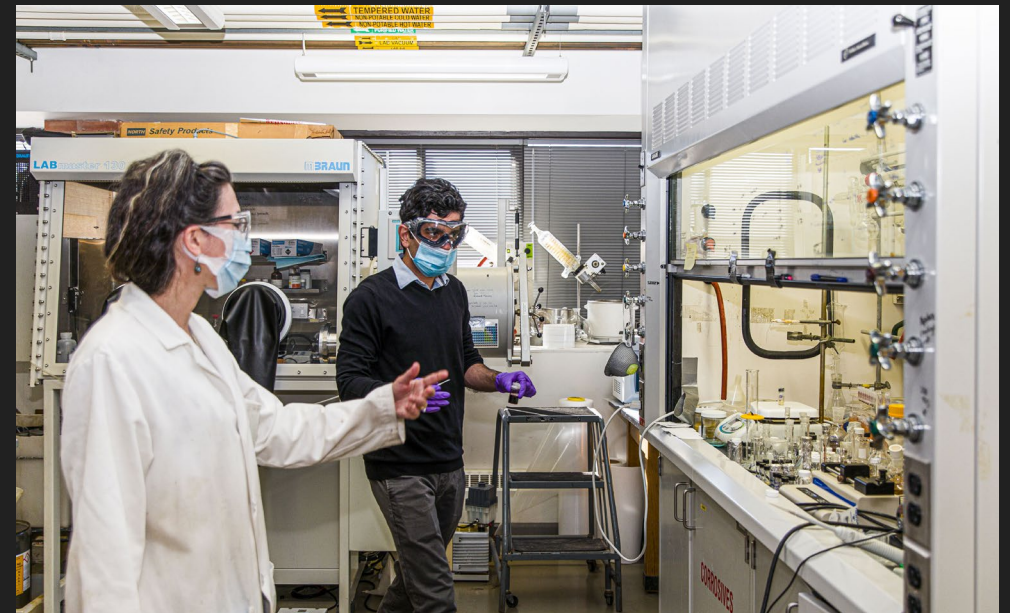
UMBC Chemistry and Biochemistry

- Medium Size Research University
- 18 Research Active Faculty
- 50 graduate students
- Student-centric program
- Strong external research support from NIH, NSF, DoD, DoE and other institutions



Who We Are?

- We are big enough to have internationally recognized research program
- Sufficiently small to maintain a close student-mentor relationship



Diverse Research Portfolio

- Biochemistry

- Dr. Songon An
- Dr. Deepak Koirala
- Dr. Aaron Smith
- Dr. Mike Summers

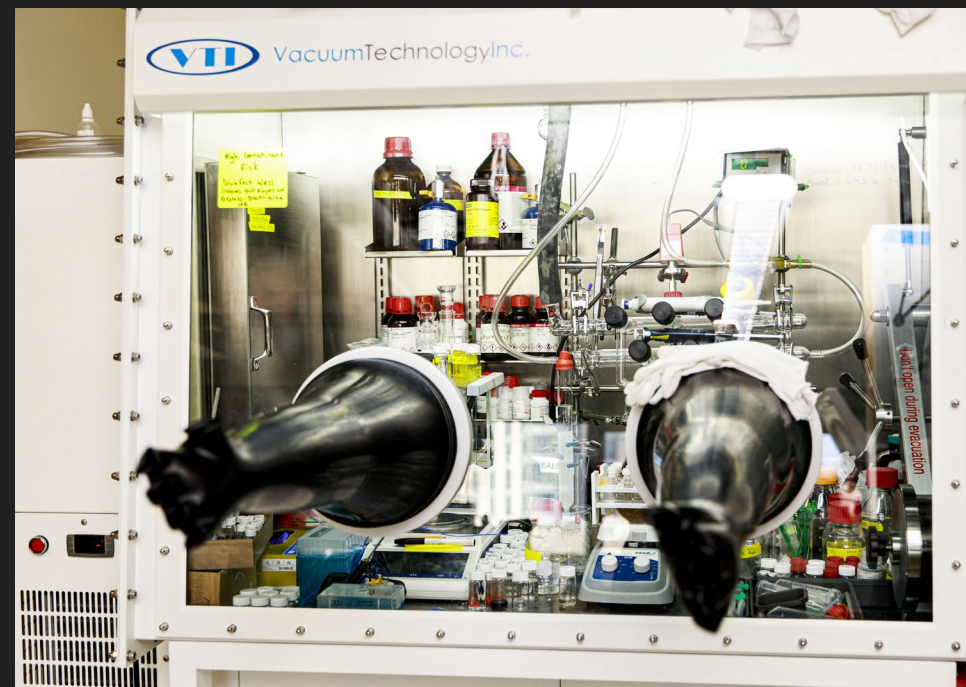
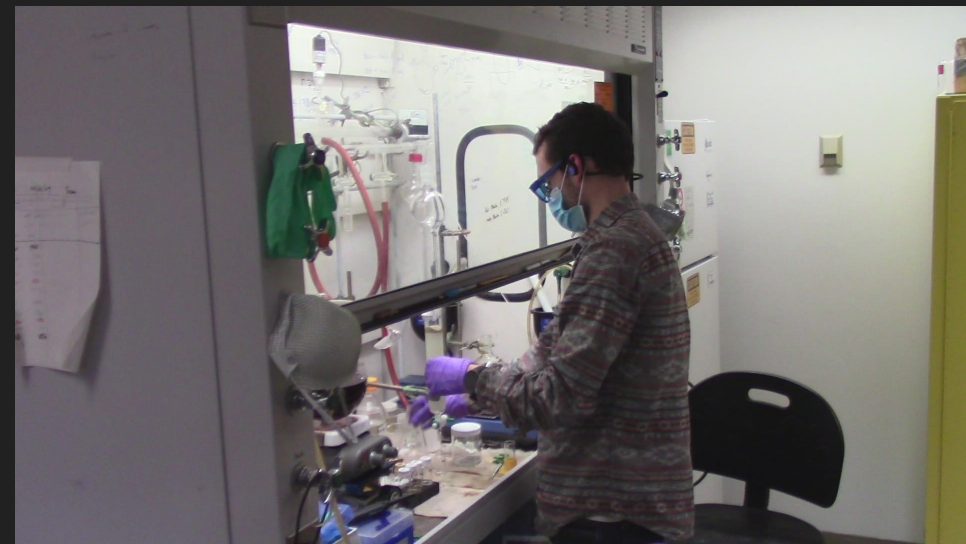
- Analytical Chemistry

- Dr. Chengpeng Chen
- Dr. Brian Cullum
- Dr. Minjoung Kyoung
- Dr. William LaCourse



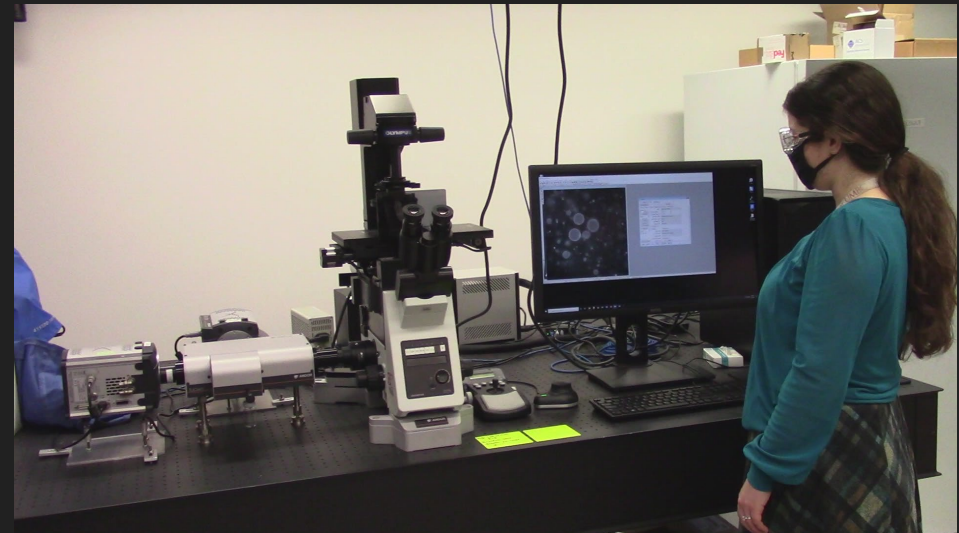
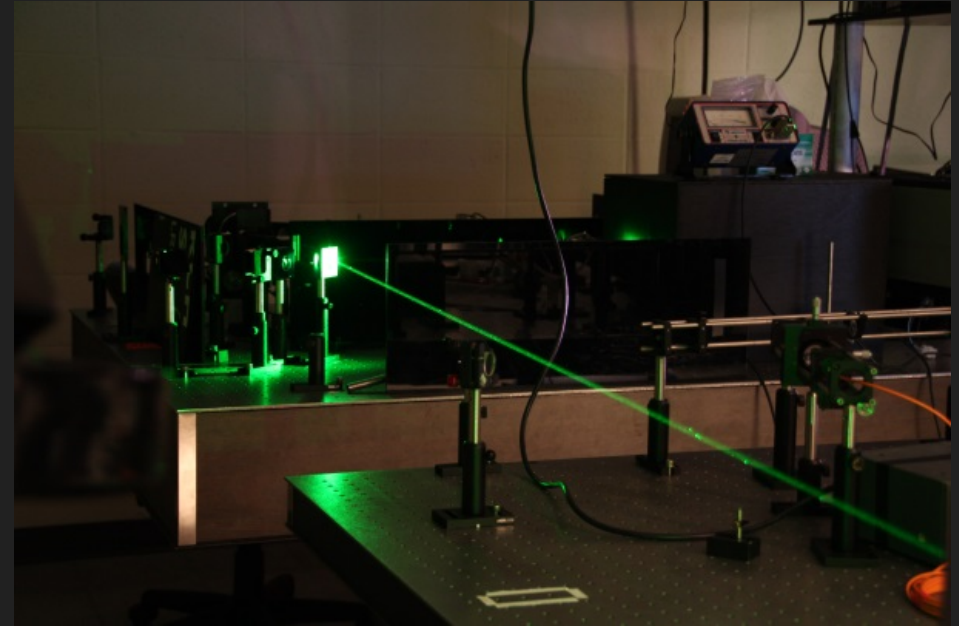
Diverse Research Portfolio

- Organic Chemistry
 - Dr. Marcin Ptaszek
 - Dr. Katherine Seley-Radtke
 - Dr. Paul Smith
- Inorganic Chemistry
 - Dr. Joseph Bennett
 - Dr. Marie Christine Daniel-Onuta
 - Dr. Zeev Rosenzweig



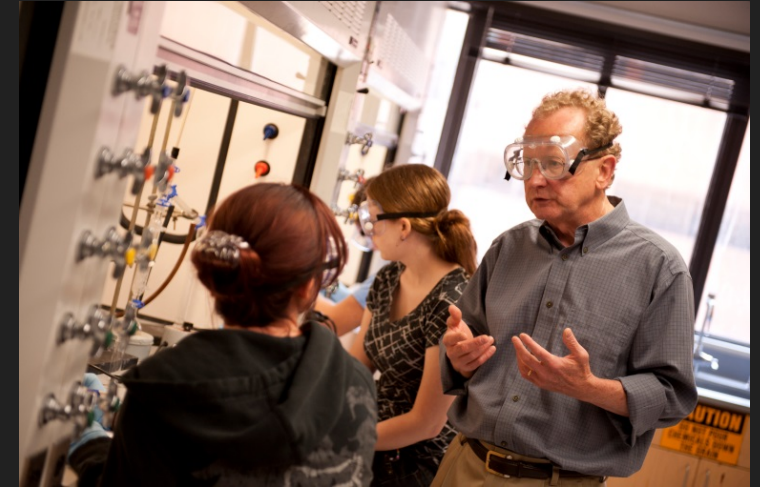
Diverse Research Portfolio

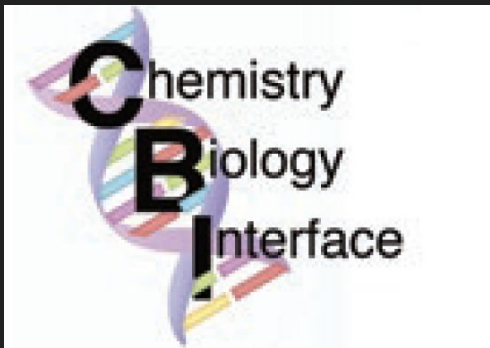
- Physical Chemistry
 - Dr. Bradley Arnold
 - Dr. Christopher Geddes
 - Dr. Lisa Kelly
 - Dr. Joel Liebman



Numerous Affiliated Programs

- Chemistry-Biology Interface (CBI) Program
- Meyerhoff Graduate Program
- REU Program
- SCIART (Science/Art) Program
- Career Centers and Workshops





Chemistry/Biology Interface Graduate Program

- **Cross-disciplinary studies in both Chemistry and Biology**
- **Ph.D. will be obtained in either Chemistry or Biology with additional focus in other discipline**
- **Opportunity to do cutting edge research with state-of-the-art equipment and an internationally known faculty**
- **Program benefits include:**
 - **Research Assistantships**
 - **Biweekly seminars on topics at the Chemistry/Biology interface**
 - **Laboratory work in both Chemistry and Biology**
 - **Advanced coursework in both Chemistry and Biology**
 - **Travel to National Conferences**

Meyerhoff Graduate Training Program

- Providing research experiences for underrepresented groups receiving a Ph.D. in biological sciences, biochemistry, chemistry, mechanical engineering, and psychology.
- Supported by the Minority Biomedical Research Support (MBRS) Branch of the National Institutes of Health (NIH) through the Initiative for Minority Student Development (IMSD) Program.
- Program benefits include:
 - All usual graduate program benefits + :
 - Monthly discussions & annual retreats
 - Community building & mentoring
 - Interaction within a diverse campus community



<https://meyerhoffgrad.umbc.edu/>

After Graduation.....

Our Alumni Find Jobs in Diverse Areas of Research and Business of Their Choice:

- Academia (post-doc, permanent research or teaching positions)
- National Research Labs (NIH, NCI, ARL, NRL)
- Chemical Industry (Shimadzu Sci., Leidos, BASI)
- Pharmaceutical Industry (Latham BioPham, US Pharmacopeia, AmbioPharm)



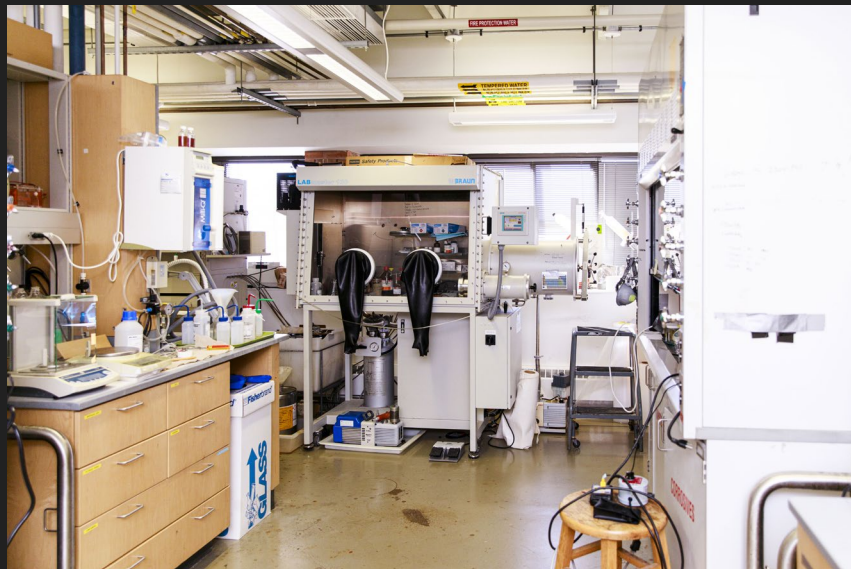


UMBC Department of Chemistry and Biochemistry Graduate Open House (Part II)

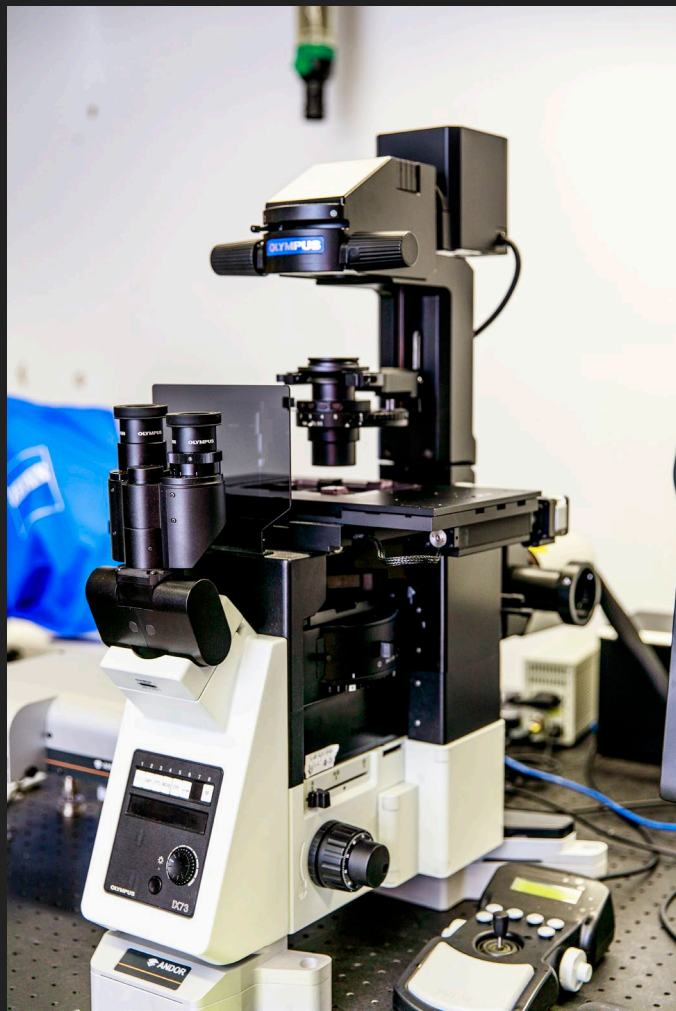
Welcome

Fall 2020

Extensive Research Infrastructure and Facilities



Confocal Microscopes



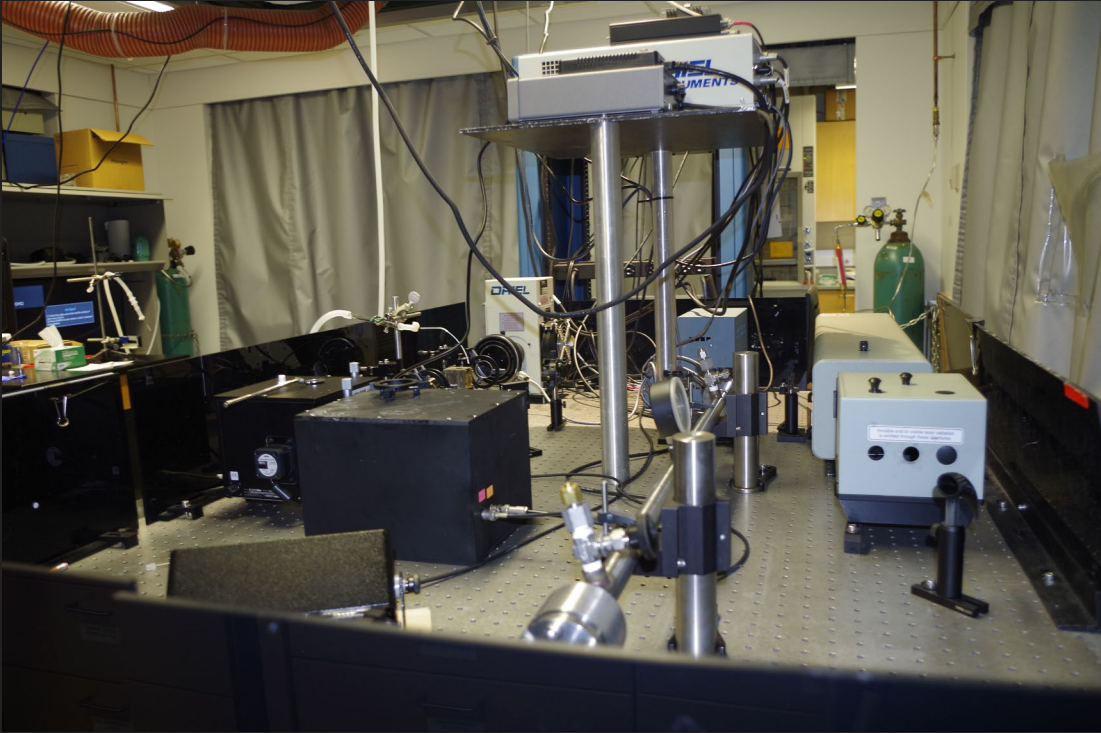
Olympus Inverted Microscope



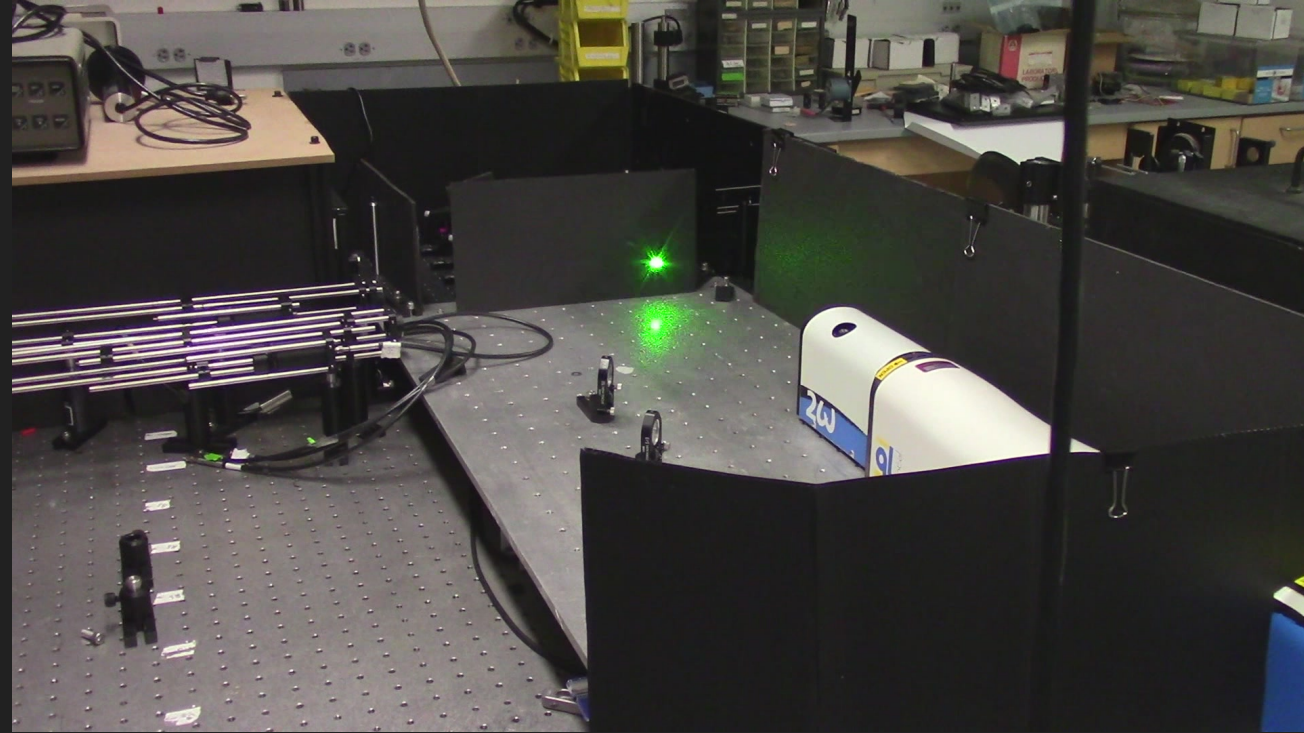
Cold Room



Laser Facility



Nanosecond laser flash photolysis
for transient absorption



Raman spectroscopy for stand-off chemical
detection

NMR Facilities



400 MHz



500 MHz



800 MHz

Molecular Characterization and Analysis Complex (MCAC)



Mass Spectrometry



Bruker timsTOF Pro MS



Bruker 12T Solar IX FT-ICR MS



Perkin-Elmer Axion TOF MS

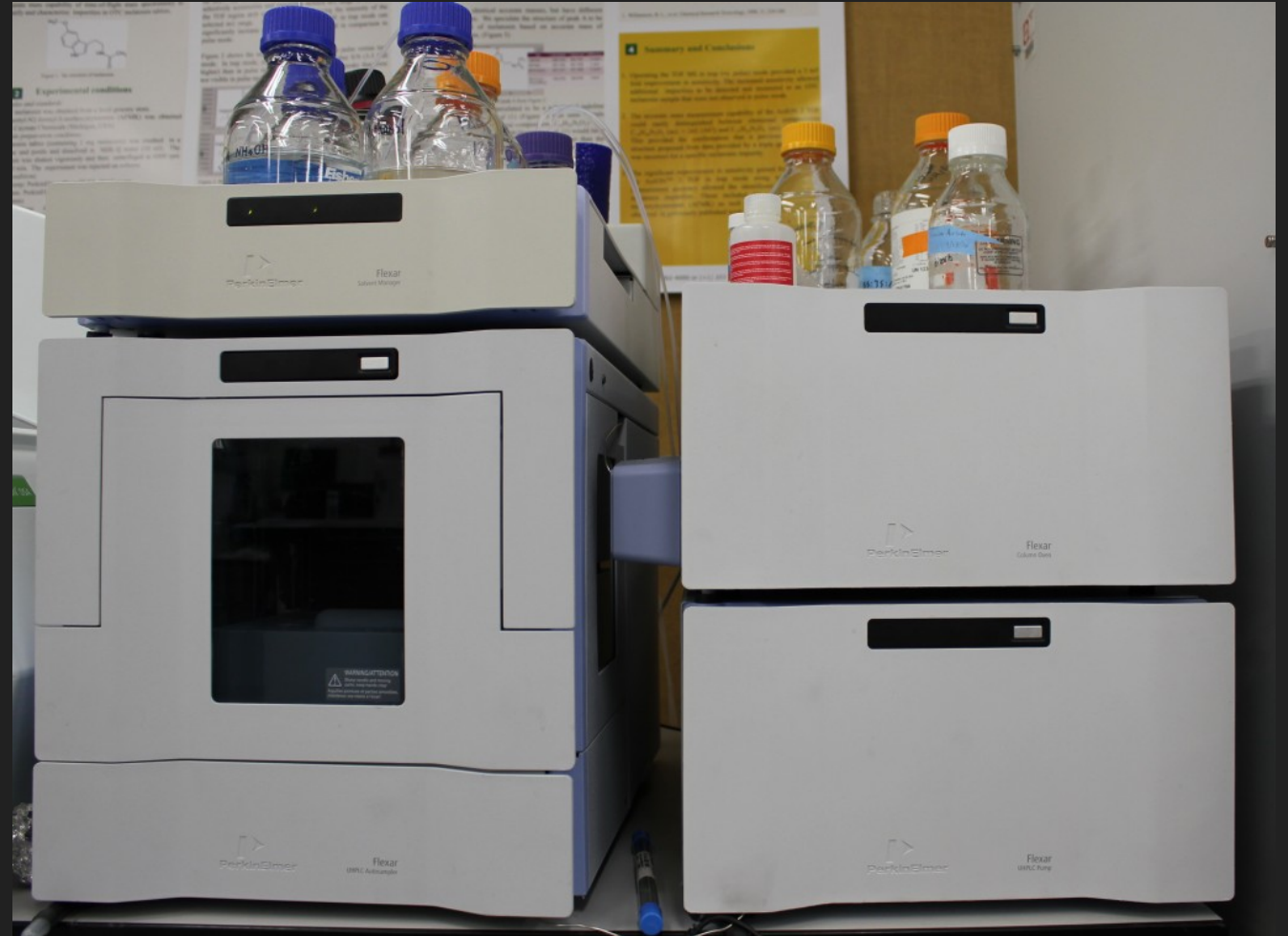


Perkin Elmer Clarus 600 MS with GC

HPLC Instruments



Dionex UltiMate 3000 HPLC



Perkin Elmer Flexar (HPLC with UV/vis and fluorescence)

Keith R. Porter Imaging Facility



Transmission Electron Microscope



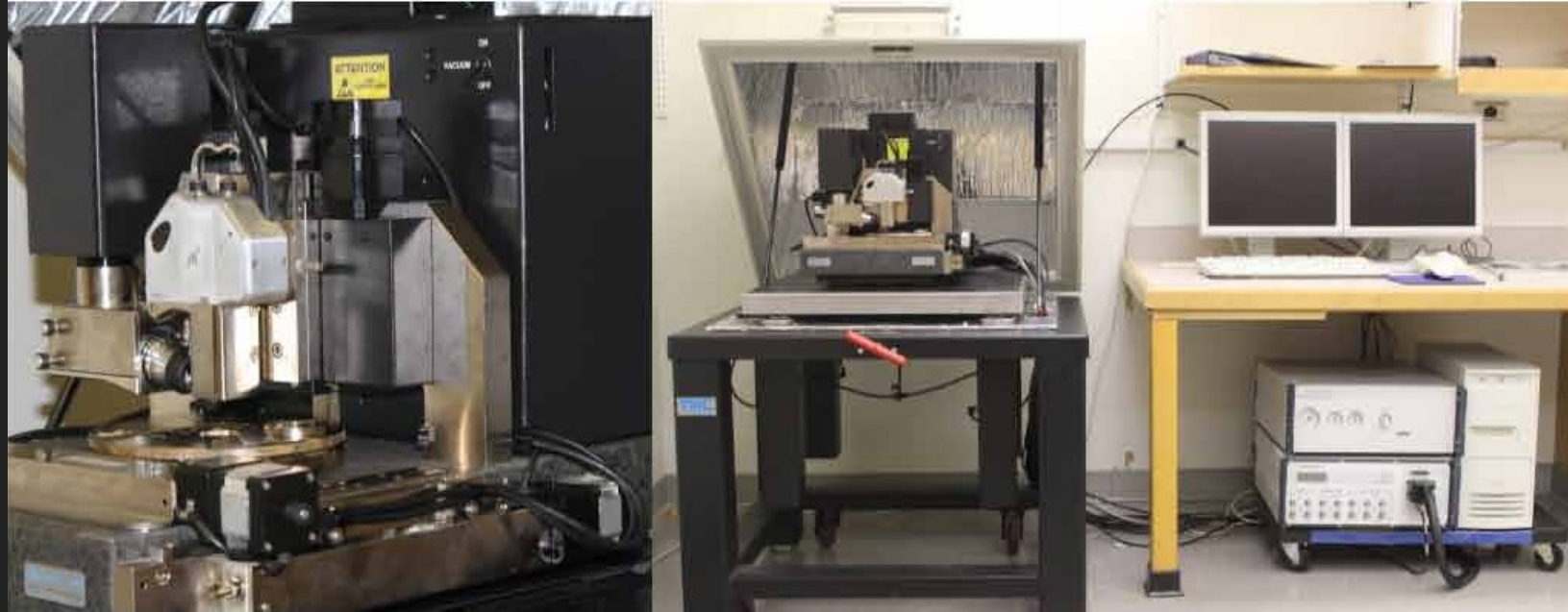
Leica SP5 Confocal Microscope

Keith Porter Imaging Facility



Scanning Electron Microscope

Keith Porter Imaging Facility



Atomic Force Microscope

UMBC Application Process

Apply for Admission to Our Graduate Programs in
Chemistry and Biochemistry

<https://chemistry.umbc.edu/>

No GRE Exam Score Required

Graduates of Domestic Universities APPLY FREE



For Questions Contact:

Dr. Marcin Ptaszek
Email: mptaszek@umbc.edu
Phone 410-455-2264

Dr. Marie-Christine Daniel
Email: mdaniel@umbc.edu
Phone: 410-455-5601



Application Package

- Personal Statement
 - Convey your enthusiasm and passion for science
 - Explain why you have chosen UMBC
 - Identify 2-4 professors as potential mentors
 - Mention your long-term career goals
- Transcript
- Reference Letters
 - “Strong” reference letters

What We Offer

- Competitive Stipend
- Health Insurance
- Tuition Remission
- Presidential Merit Award
- Dean Merit Award



Graduate Progression

- Research rotation (1st semester)
- Research group selection (1st semester)
- Literature review (3rd semester)
- Candidacy exam (5th semester)
- Independent proposal
- Defense (~10th Semester)



Graduate Summer Bridge

- Unique for UMBC
- Starts last week of July
- Focuses on students' preparation for graduate classes
- Opportunity to meet Faculty and learn more about ongoing research
- Opportunity to meet your new colleagues
- Opportunity to get familiar with Department and campus before semester starts



Graduate Research Day

- Hold annually on the first Friday of March
- Students present their research posters
- External reviewers are invited to evaluate students' posters
- Graduate Research Awards are presented
- Awards for Excellence in Teaching are presented
- Alumni share their experience with current students



Questions?

Contact: Dr. Marcin Ptaszek (mptaszek@umbc.edu)

We are looking forward to seeing you at UMBC!

