Fatemeh Ostadhossein

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EDUCATION AND TRAINING

NIH NRSA CARDIOVASCULAR IMAGING POSTDOCTORAL FELLOW Oct 2019- present
Stanford University
Mentor: Prof. Joseph Wu, *Co-mentor*: Prof. Sarah Heilshorn

BECKMAN POSTDOCTORAL FELLOW Mar 2019-Sep 2019 (6 months)
University of Illinois at Urbana Champaign, Beckman Institute
Mentors: Prof. Dipanjan Pan, Prof. Rohit Bharagava, Prof. Jefferson Chan

PHD Aug 2014-Feb 2019
University of Illinois at Urbana Champaign, Department of Bioengineering
Dissertation: A Drug-free Theranostic Approach for Localized and Systemic Diseases *via* Hafnium and Carbon Nanoparticles
Advisor: Prof. Dipanjan Pan
Thesis Committee: Prof. Catherine J. Murphy, Prof. Shuming Nie, Prof. Wawrzyniec Dobrucki

MASTER OF SCIENCE Aug 2014-Dec 2015
University of Illinois at Urbana Champaign, Department of Bioengineering
Thesis: A Next Generation Theranostic Nano-platform for Sustained Inhibition of Cancer Stem Cells

MASTER OF SCIENCE Sep 2012 - Aug 2014
Sharif University of Technology, Department of Materials Sci.& Eng.
GPA – 18.07/20
Thesis: Fabrication and Characterization of Novel Electrospun Chitosan Fibers Reinforced with Bacterial Cellulose and Nanodiamonds for Wound Dressing Applications

BACHELOR OF SCIENCE Sep 2008 - Sep 2012
Sharif University of Technology, Department of Materials Sci.& Eng.
GPA – 17.98/20, Summa Cum Laude-1st ranked student

POSITIONS

- Stanford NIH Cardiovascular Imaging Fellow, Oct 2019- present
- Interim Beckman Institute Postdoctoral Fellow, Apr 2019- Sep 2019

RESEARCH SUPPORT & FUNDING

- Oct 2019-Oct 2021, NIH Ruth l. kirschstein NRSA postdoctoral fellowship, Cardiovascular imaging, $100 K
- Apr 2019-Apr 2022, Beckman Institute Post-doctoral Fellowship, $181K
- Apr 2018-Apr 2019 (early termination): American Heart Association Predoctoral Fellowship, $50K, two- year support
- Jun 2016-Aug 2017: Carle Illinois Collaborative Research Seed Grant Award, $43K Grant, **Co-Investigator**, Personalized Absorbable Gastrointestinal Stents for Intestinal Fistulae and Perforations

PEER REVIEWED PUBLICATIONS, N=29, 10 FIRST-AUTHOR

Citations: 337, H-index=12
| denotes student mentee,$^{+}$ denotes equal contribution

2020

29. **F. Ostadhossein**, D. Sar, I. Tripathi, J. Soares, E. Remsen, D. Pan, "Oligodots: Structurally defined fluorescent nanoprobes for multi-scale dual-color imaging", **ACS Applied Materials and Interfaces**, DOI: 10.1021/acsami.0c00705. **[Link]**. **IF:8.75**

2019

28. **F. Ostadhossein**, I. Tripathi, L. Benig[|], D. LoBato, M. Moghiseh, C. Lowe, A. Raja, A. Butler, R. Panta, M. Anjomrouz, A. Chernoglazov, D. Pan, "Multi 'Color' Delineation of Bone Micro-damages using Ligand Directed Hafnia Nanodots and Photon Counting CT Imaging", **Advanced Functional Materials**, 2020, 30, pp 1904936-1904948. **[Link]** **IF:16.83**.
Inside back cover
Highlighted in many news resources: Phys.org, Eurek alert, Imaging technology news, sciencedaily, mddionline (medical device and diagnostic industry), dotmed (healthcare business, Physicsnews, etc)

27. S.K. Misra[+], Z. Wu[+], **F. Ostadhossein**, M. Ye, K. Schulten, E. Tajkhorshid, D. Pan, "Pro-Nifuroxazide Self-Assembly Leads to Triggerable Nanomedicine for Anti-cancer Therapy", **ACS Applied Materials and Interfaces**, 2019, 11, pp 18074-18089. **[Link]** **IF:8.75**

26. P. Fathi, ..., **F. Ostadhossein**, S.k. Misra, M. Esch, J. Chan, D. Pan, "Biodegradable Biliverdin Nanoparticles for Efficient Photoacoustic Imaging, **ACS Nano**, 2019, 13, pp 7690-7704. **[Link]** **IF:14.58**

25. P. Fathi, G. Capron, I. Tripathi, S. Misra, **F. Ostadhossein**, L. Selmic, B. Rowitz, D. Pan, "Computed Tomography-Guided Additive Manufacturing of Personalized Absorbable Gastrointestinal Stents for Intestinal Fistulae and Perforations", **Biomaterials**, 2019. **[Link]** **IF:10.31**

2018

24. **F. Ostadhossein** , S.K. Misra, I. Tripathi, V. Kravchuck[|], G. Vulugundam, D. LoBato, L. Selmic, D. Pan, "Dual Purpose Hafnium Oxide Nanoparticles Offer Imaging Streptococcus mutans Dental Biofilm and Fight it In vivo via a Drug Free Approach", **Biomaterials**, 2018, 181, pp 252-267. **[Link]** **IF:10.31** *Highlighted in many news resources: Phys.org, Science Daily, Nanowerk, Eurek alert, illinois.edu front page, News India Times, nplus1 (in Russian), etc.*

23. **F. Ostadhossein**, L. Benig[|], S.K. Misra, D. Pan, "A Targeted Carbon Dot Based Probe for the *In Vivo* Fluorescence Imaging of Bone", **ACS Applied Materials and Interface**, 2018, 10, pp 19408-19415. **[Link]** **IF:8.75**

22. **F. Ostadhossein**[+], G.R. Vulugundam[+], S.K. Misra[+], I. Srivastava, D. Pan, "Chirality Inversion on the Carbon Dot Surface via Covalent Surface Conjugation of Cyclic alpha-Amino Acid Capping Agents", **Bioconjugate Chemistry**, 2018, 29, pp 3913-3922. **[Link]** **IF:4.03**

21. I. Tripathi[+], S. K. Misra[+], **F. Ostadhossein**, I. Srivastava, D. Pan, " Synthesis of Chiral Carbo-Nano-Tweezers for Enantiospecific Recognition and DNA Duplex Winding in Cancer Cells", **ACS Applied Materials and Interfaces**, 2018, 10, pp 37886-37897. **[Link]** **IF:8.75**

20. I. Tripathi, L. K. Dodgen [+], **F. Ostadhossein**[+], ..., D. Pan, " Biodegradable Nano Carbon based Smart Filters for Efficient Remediation of Pharmaceutical Contaminants", **Journal of Materials Chemistry A**, 2018, 6, pp 22851-22957. **[Link]** **IF:11.30**
Highlighted in Daily Illini: The independent student newspaper at the University of Illinois since 1871

19. D. Sar[+], I. Srivastava[+], S.K. Misra, **F. Ostadhossein**, P. Fathi, D. Pan, " Copper-Catalyzed C-N Cross-Dehydrogenative Coupling for Synthesis of Pyrene-Pyrazole Pharmacophores and Structure Activity Studies for Tubulin Polymerization", **ACS Omega**, 2018, 3, 6, pp 6378-6387.**[Link]** **IF:2.87**

18. D. Sar [+], B. Kim [+], **F. Ostadhossein**, S.K. Misra, D. Pan, "Revisiting Polyarenes and Related Molecules: An Update of Synthetic Approaches and Structure-activity-mechanistic Correlation for Carcinogenesis", **The Chemical Record**, 2018, 18, pp 619- 658. **[Link]** **IF:6.16**

17. M. Ye[+], S. K. Misra[+], A.k. De[+], **F. Ostadhossein**, ..., D. Pan, "Synthesis, and Characterization of Globular Orphan Nuclear Receptor Regulator with Biological Activity in Soft Tissue Sarcoma", **Journal of Medicinal Chemistry**, 2018, 61, pp , 10739−10752. **[Link]**. **IF:6.20**
Highlighted in several news resources: illnois.edu homepage, Eurek alert, Medicalxpress, News-medical, technology networks, etc.

2017

16. **F. Ostadhossein**, ..., D. Pan, "Nanosalina: A Tale of Saline-Loving Algae from the Lake's Agony to Cancer Therapy", **ACS Applied Materials and Interfaces,** 2017, 9, 13, pp 11528-11536. **[Link]** **IF:8.75**.

15. S. K. Misra, **F. Ostadhossein**[+], E. Daza[+],..., D. Pan, "Hyperspectral Imaging Offers Visual and Quantitative Evidence of Drug Release from Zwitterionic-Phospholipid-NanoCarbon when Concurrently Tracked in Three-dimensional Intracellular Space", **Advanced Functional Materials**, 2016, 26, 44, pp 8031-8041.**[Link] IF:16.83**
Highlighted in many news resources: Phys.org, Science Daily, Nanowerk, Eurek alert, etc.

14. S.K. Misra[+], I. Srivastava[+],..., **F. Ostadhossein**, D. Pan, "Macromolecularly "Caged" Carbon Nanoparticles for Intracellular Trafficking via Switchable Photoluminescence", **Journal of American Chemical Society**, 2017, 139, 5, pp 1746-1749. **[Link] IF:14.61**
Highlighted in many news resources: Science Daily, Nanowerk, Eurek alert, etc.

13. I. Srivastava, S. Misra, **F. Ostadhossein**, ..., D. Pan, "Personalized Medicine Through Nanotechnology: Mechanistic Understanding of Nanoparticle Uptake in Stage-dependent Cancer Cells", **Nano Research**, 2017, 10, 10, pp 3269-3284. **[Link] IF:8.18**
Front cover

12. S.K. Misra, A. S. Schwartz-Duval[+], **F. Ostadhossein**[+],..., D. Pan, "aplha-Amino Acid Rich Photophytonic Nanoparticles of Algal Origin Reveals Serendipitous Anti-migratory Property Against Cancer", **ACS Applied Materials and Interfaces**, 2017, 9, 25, pp 21147-21154. **[Link] IF:8.75**

11. S. Misra, **F. Ostadhossein**,..., D. Pan, "3D-Printed Multidrug-Eluting Stent from Graphene-Nanoplatelet-Doped Biodegradable Polymer Composite", **Advanced Healthcare Materials**, 2017, 6, 11, pp 1700008- 170020. **[Link] IF:7.36**

10. M. Khan, S. Misra, A. Schwartz-duval, E. Daza, **F. Ostadhossein**,..., D. Pan, "Real-Time and In Situ Monitoring of Post-surgical and Post-traumatic Eye Injury using a Biosensor from Multi-layered Graphene-Diblock-Copolymer", **ACS Applied Materials and Interfaces**, 2017, 9, 10, pp 8609-8622. **[Link] IF:8.75**

2016

9. **F. Ostadhossein**[+], S. K. Misra[+], .., D. Pan, "Nanoscale Host-guest Chemistry for Sustained Inhibition of Stem like Cancer Cells", **Small**, 2016, 12, 42, pp 5845-5861. **[Link] IF:11.46**
Inside front cover

8. **F. Ostadhossein**, D. Pan, "Functional Carbon Nanodots for Multiscale Imaging and Therapy", **WIREs Nanomedicine Nanobiotechnology**, 2016, 9. **[Link] IF:7.69**
Invited review paper

7. S. K. Misra, M. Ye, **F. Ostadhossein**, D. Pan, "Pro-haloacetate Nanoparticles for Efficient Cancer Therapy via Pyruvate Dehydrogenase Kinase Modulation", **Scientific Reports**, 2016, 6, pp. 28196. **[Link] IF:3.99**
Highlighted in nanowerk.com, news-medical.net

6. G.R.Vulugundam [+], S. K. Misra[+], **F. Ostadhossein**, ..., D. Pan, "(-)/(+)-Sparteine Induced Chirally-active Carbon Nanoparticles for Enantioselective Separation of Racemic Mixtures", **Chemical Communications**, 2016, 52, 47, pp. 7513-7516. **[Link] IF:5.99**

5. S. K. Misra, T. Ray, **F. Ostadhossein**,...,D.Pan, "Carotenoid Nanovectors for Delivery of Bio-therapeutics by Molecularly Targeting Transcription Factor in Cancer", **Bioconjugate Chemistry**, 2016, 27, 3, pp. 594-603. **[Link] IF:4.03**

4. N. Mahmoudi, **F. Ostadhossein**, A. Simchi, "Physicochemical and Antibacterial Properties of Chitosan-Polyvinylpyrrolidone Films Containing Self-organized Graphene Oxide Nanolayers", **Journal of Applied Polymer Science**, 2016, 133, 11, pp. 43194. **[Link] IF:2.52**
Highlighted in ChemistryViews.org

2015 and earlier

3. **F. Ostadhossein**, ..., A. Simchi, "Development of Chitosan/Bacterial Cellulose Composite Films Containing Nanodiamonds as a Potential Flexible Platform for Wound Dressing", **Materials**, 2015, 8, 9, pp. 6401-6418. **[Link] IF:3.05**

2. T. Gheiratmand, H. R. M. Hosseini, P. Davami, **F. Ostadhossein**, M. Song, and M. Gjoka, "On the Effect of Cooling Rate during Melt spinning of FINEMET Ribbons", **Nanoscale**, 2013, 5, 7520-7527. **[Link] IF:6.89**

BOOK CHAPTER

1. **F. Ostadhossein**, E. A. Daza, D. Frankowski, D. Goatz, M. Imgruet, J. Kus, R. Lake, M. Modak, N. Olsen, A. Schwartz-Duval, A. Zimmer, N. Kolmodin, D. Pan,Nano-Enabled Delivery of Intracellular Therapeutics. In: Pan D, ed. Personalized Medicine with a Nanochemistry Twist: Nanomedicine. Cham: Springer International Publishing; 2016, 105-119.

PATENTS AND DISCLOSURES

- **F. Ostadhossein**, S. K. Misra, D. Pan, "Carbon Nanoparticles for Drug Delivery and Methods of Making the Same.", US Provisional Patent Application, serial number 62/371,455.
- **F. Ostadhossein**, S. K. Misra, D. Pan, "Antibacterial and Diagnostic Feasibility of Inherently Therapeutic Nano-Hafnium for Periodontal Disease.", UIUC disclosure.

UNDER PREPARATION/ IN REVISION PUBLICATIONS

8. **F. Ostadhossein**, E. Altun[|], D. Dutta, D. Sar, I. Tripathi, S. Hsiao, V. Kravchuk[|], S. Nie, D. Pan, "An antibiotic Free Approach for Topical Eradication of Dental Biofilm without Disturbing Microbiota Balance In vivo", Advanced Science, *Under review*.

7. **F. Ostadhossein**, M. Nelappana[|], C. Lowe, M. Moghiseh, A. Butler, N. Ruiter, H. Mandalika, I. Tripathi, S.k. Misra, D. Pan, "Hitchhiking Probiotic Vectors to Deliver Ultra-Small Hafnia for 'Color' Gastrointestinal Tract Photon Counting X-ray Imaging", Nanoscale Horizon, *Under major revision*.

6. **F. Ostadhossein**, M. Alafeef, D. Sar, S. D'Souza[|], L. Benig[|], M. Neleppana[|], X. Huang, J. Soares, K. Zhang, D. Pan, "Ensemble and single-particle level fluorescent fine-tuning of carbon dots via positional changes of amines for the 'supervised' oral microbiome sensing", *Internal review* manuscript available upon request.

5. D. Sar [+], **F. Ostadhossein** [+], P. Moitra [+], M. Alafeef, D. Pan, " Small Molecule NIR-II Dyes for Switchable Photoluminescence via Host -Guest Complexation and Supramolecular Assembly with Carbon Dots", *Under review*.

4. S. K. Misra, M. Ye, A. Sharma, E. Daza, A. S. Schwartz-Duval, **F. Ostadhossein**, K. Dighe, D. Pan, "Photo-Thermal Remediation of Hazardous Genetic Material on Carbon-Allotrope Surface", *Submitted*.

3. K. Dighe[+], **F. Ostadhossein**[+], D. Pan, "Design of a Sensitive Biosensor for the Detection of Traumatic Brain Injury", *Under preparation*.

2. **F. Ostadhossein**, E. Altun[|], D. Pan, "High Yield Synthesis of Chiral Metal Dichalcogenides Based on HfS2 for Guiding MSC differentiation", *Under preparation*.

1. D. Sar [+], **F. Ostadhossein**[+], D. Pan, "Efficient Nanoparticle Mediated Delivery of CRISPR/ Cas9", *Under preparation*.

AWARDS AND HONORS, TOTAL RAISED:$237K

FELLOWSHIPS & SCHOLARSHIPS

Aug 2020: **BMES Career Development Award** to cover registeration fee, BMES 2020, Virtual Meeting

Jun 2020: **Outstanding thesis award in Carbon Science and Technology**, 2nd place winner, Organized by Carbon Journal, Carbon's extended advisory board for 3 y

May 2020: **ACS** Postdoc to Faculty Workshop (a.k.a. P2F)

Mar 2020: **CAS Future Leaders Class 2020** (selected among 1000 applicants worldwide), All expense coverage to CAS facilities, ACS national meeting, $1000 monetary prize, 3y ACS membership, feature in C&en magazine, etc.

Oct 2019: **NIH Ruth l. Kirschstein NRSA** Postdoctoral Fellowship, Cardiovascular Imaging, $100 K

Aug 2019: Annual Biomedical Research Conference for Minority Students (ABRCMS) **Judge Travel Award**, $1250

Jul 2019: **NextProf Nexus Workshop Travel Award**, Sponsered by the University of California, Berkeley, the University of Michigan, The Georgia Institute of Technology, Atlanta, GA

Jan 2019: **Beckman Institute Post-doctoral Fellowship**, $181K, Three- year support

Jun 2019: **NSF Soft Matter Future Faculty Workshop Travel Award**, Princeton University, NJ

Jul 2019: **BMES Career Development Award**, BMES 2019, PHL

Sep 2018: **American Institute for Medical and Biological Engineering (AIMBE)** Public Policy Travel Award, $1400

Apr 2018: **American Heart Association** Predoctral Fellowship, $54K, two- year support

Apr 2017: Mavis **Future Faculty** Fellowship Award, $2K

Apr 2017: Nadine Barrie Smith Memorial Fellowship Award for **Women in Bioimaging**, $4K

Nov 2016: **Foundation for Women's Wellness (FWW)** Women's Health Fellowship Award (Gridley McKim-Smith Women's Health Fellowship Award), $5K

Nov 2015: Firdawsi **Science Fellowship** Award

Sep 2013: MSc Research Grant, **Iran Nanotechnology Initiative Council**

Dec 2011: Direct Admission to Master's Program, Sharif University of Technology

Sep 2008: **Full Scholarship Award**, Undergraduate Program, Sharif University of Technology, Department of Materials Sci. & Eng.

RESEARCH PRESENTATION AWARDS

Feb 2020: Selected as **PMSE Future Faculty Symposium**, American Chemical Society, Division of Polymeric Materials: Science and Engineering, ACS Fall (Invited)

Jan 2019: Selected speaker for **Midwest Speaker Exchange**, Purdue University (Invited)

Nov 2018: **NanoArtography Competition**: Runner-up

Apr 2018: **Chemistry in Pictures**: Totally tubular, Featured on C&En ACS journal

Apr 2018: MRS Spring Meeting **Science as Art Finalist**

Feb 2018: **Chemistry in Pictures**: 2-D aquarium, Featured on C&En ACS journal

Nov 2016: **Best presentation**. 1^{st} place, *MRL Biological Fall Conference*, UIUC

Sep 2016: **Best poster presentation**. 2^{nd} place, *American Vacuum Society Prairie Chapter*, Chicago

May 2016: **Honorable mention award**, poster presentation, *CNST* Nanotechnology Workshop 2016, UIUC

Feb 2016: **Best poster presentation**. 2^{nd} place, 6^{th} Annual Postdoctoral Symposium at Beckman Institute, UIUC

ACADEMIC RECOGNITION and AWARDS

Aug 2018: Selected for **ISUR mentorship** (Illinois Scholars Undergraduate Research) Program

July 2017: Selected participant for **NIH Clinical Center's Clinical and Translational Research Course**, NIH, Bethesda, MD

Aug 2016: Selected for **Illinois Female Engineers in Academia Training** (iFEAT) program

Aug 2016: Selected as **graduate mentor in URAP UI** (Undergraduate Research Apprenticeship Program), co-sponsored by the Illinois Office of Undergraduate Research and the Educational Equity Programs Office in the Graduate College

Jun 2013: Outstanding Undergraduate Alumnus, **Chancellor's list**, Awarded by the Chancellor of Sharif University of Technology, Graduation Ceremony

Sep 2012: Outstanding Undergraduate Student, **Dean's Honor List**, Awarded by the Dean of the Department of Materials Sci. & Eng., Sharif University of Technology, 2012

Aug 2012: Graduated with Honors, **Cumulative 1^{st} Ranked Student** in Department of Materials Sci. & Eng. at Sharif University of Technology, B.Sc., 2012

Dec 2011: **CETS** (**C**enter of **E**xceptional **T**alents) Award, Sharif University of Technology

Aug 2008: Standing Among **Top *0.2%*** Out of More than 400,000 Participants in Iranian Nationwide University Entrance Exam, Mathematics and Physics

Aug 2008: Ranked ***159th*** Among More than 100,000 Participants in Iranian Nationwide University Entrance Exam, Foreign Languages

SELECT POPULAR MEDIA

Profile feature in 1 Million Women in STEM (1MWIS) as the role model **[Link]**
C&En article on CAS Future Leaders **[Link]**
2020 CAS Future Leaders Selection Announcement **[Link]**
Researchers use color x-ray scanner, 'GPS particles' to pinpoint microfractures **[Link]**
PhD research feature: Find, Fight, Follow: Using nanoparticles to solve biomedical challenges **[Link]**
2019 Beckman postdoctoral fellows announced **[Link]**
New drug seeks receptors in sarcoma cells, attacks tumors in animal trials **[Link]**
A Nano Solution To Identify Harmful S. Mutans Biofilm **[Link]**
Novel nanoparticle-based approach detects and treats oral plaque without drugs **[Link]**
Tap water filter aims to remove potentially harmful pharmaceuticals **[Link]**
Ostadhossein to receive prestigious AHA fellowship **[Link]**
Chemistry in Pictures: 2-D aquarium **[Link]**
Chemistry in Pictures: Totally tubular **[Link]**
Luminescence switchable carbon nanodots follow intracellular trafficking and drug delivery **[Link]**
Ostadhossein Earns Gridley McKim Smith Women's Health Fellowship Award **[Link]**
Nanotechnology-based approach to repair the cancer cell suicide mechanism **[Link]**
Drug delivery quantified through nanoparticles inside a cell **[Link]**

TEACHING AND MENTORSHIP

GRADUATE LEVEL

Fall 2018- present: Mentor, Miss Esra Altun (MS) (Now a PhD student at UIUC)

Spring 2019: *Featured Speaker*, BIOE 570, Seminar Series, Carbon Dots: Fluorescent Nanobeacons for Multiscale Imaging and Therapy.

Spring 2019: *Guest Speaker*, BIOE 498/598, Imaging & Therapeutic Probes, Topic on MRI.

Fall 2018: *Guest lecturer*, Capstone Project BIOE 575, Discussion on Spectral CT and 3D Slicer software.

Fall 2018: *Invited speaker*, BIOE 502, panel discussion on fellowship application

Spring 2018: *Guest lecturer*, Capstone Project BIOE 575

Fall 2017: *Teaching Assistant*, Capstone Project BIOE 575

May 2016- July 2016: Guided a team of three graduate researchers in Master of Engineering in Bioinstrumentation program on capstone project, UIUC-Carle Foundation Hospital

UNDERGRADUATE LEVEL

Fall 2018- Spring 2019: Mentorship through ISUR (Illinois Scholars Undergraduate Research)

Fall 2015- Present: Nine undergraduate research assistants, Mr. Michael Nelappana, Miss Valeriya Kravchuk (now at University of Kentucky Med School) , Miss Lily Benig (via ISUR, now at Epic), Miss Shannon D'Souza (now at AbbVie), Mr. Justin Silberman, Mr. Zach Saldivar (now at Veeva Systems), Miss Hiba Shahid, Mr. Shrey Maheshwari (via URAP, now at Deloitte), Miss Adriana Salazar.

SELECT PEER REVIEWED CONFERENCE/ INVITED PRESENTATIONS, N_{ORAL}=20

American Chemical Society; San Francisco, CA, *To be held virtually*, PMSE Future Faculty Symposium, Online Presentation, Aug 2020, ***Invited***.

American Chemical Society; San Francisco, CA, *To be held virtually*, *1 Oral Presentation and 2 poster Presentations*.

American Institute of Chemical Engineering; San Francisco, CA, *To be held virtually*, *2 Oral Presentations and 1 poster Presentation at Meet the Faculty Candidate*.

Stanford University; Palo Alto, CA, *Oral Presentation*, Women in Molecular Imaging Network (WIMIN) Interest Group, Online Presentation, Jul 2020, ***Invited***.

Virtual Seminars in Biomedical Science; *Oral Presentation*, Jul 2020, ***Invited***.

BMES Annual Meeting 2019, Philadelphia, PA, *1 Oral Presentation and 1 Poster Presentation*, Oct 2019.

Purdue University; West Lafayette, IN, *Oral Presentation*, Feb 2019, ***Invited***.

BMES Annual Meeting 2019, Philadelphia, PA, *1 Oral Presentation and 1 Poster Presentation*, Oct 2019.

Engineering Biology for Medicine Conference by Nature Biomedical Engineering, and Nature Medicine; Duke University, NC, *Poster Presentation* (poster only), May 2019.

Materials Research Society (MRS) Spring Meeting; Phoenix, AZ, *5 Oral Presentations*, April 2019. *Materials Research Society*; Phoenix, AZ, Oral Presentation, April 2019. Highlighted talk by MRS newsletter **[DETAILS]**

Materials Research Society (MRS) Spring Meeting; Phoenix, AZ, *1 Oral Presentation and 2 Poster Presentations*, April 2018.

AIChe Midwest Regional Conference; Illinois Institute of Technology, Chicago, IL, *2 Oral Presentations*, March 2018.

Bioengineering Graduate Student Seminar; UIUC; *Oral Presentation*, Nov 2017 (by selection only).

Society of Biomaterials Regional Conference; University of Michigan Ann Arbor; *Oral Presentation*, Oct 2017.

Graduate Students Seminar; Beckman Institute , UIUC; *Oral Presentation*, Oct 2016.

Materials Research Society Fall Meeting; Boston, MA, *1 Oral and 2 Poster Presentations*, Nov-Dec 2016.

American Vacuum Society Prairie Chapter; Chicago, IL, *Poster Presentation*, Nov-Dec 2016.

BMES regional meeting; UIUC, IL; *Poster Presentation*, Nov 2016.

BMES Annual Meeting; Tampa, Florida, *Oral Presentation*, October 2015.

CNST Nanotechnology Workshop; UIUC, IL, *Poster Presentation*, May 2016

Society of Post-doctoral Scholar Symposium; UIUC, *Poster Presentation*; March 2016.

BIOE Day, UIUC, *Poster Presentation*, March 2016.

CNST Nanotechnology Workshop 2015; UIUC, IL, *Poster Presentation*, 2015.

REVIEWING ACTIVITIES (SINCE 2016)

Main reviewer for: Biomaterials (1), Nature Scientific Reports (4), Theranostics (1), ChemComm (2), Advanced Healthcare Materials (1), Carbohydrate Polymers (1), IEEE Sensor (1), Diamond and Related Materials (1), International Journal of Biological Macromolecules (2) Assistant reviewer for: Nature Biomedical Engineering, ACS Nano, Acta Biomaterialia

LEADERSHIP EXPERIENCES

Session Chair and Organizer Society for Biomaterials Annual Meeting 2021, *Biomaterials for Image-guided Therapy*
Extended Advisory Board Carbon Journal, Elsevier, Jun 2020-2023
Discussion Leader Human Diseases at the Crossing of Science, Engineering and Medicine Workshop; Illinois- Mayo Clinic Alliance, Apr 2019
Poster and Oral Session Judge Undergraduate Research Symposium, UIUC, Apr 2019
Session Chair for Modeling of Bio and Pharmaceutical Processes AIChe Midwest Regional Conference, Chicago, Mar

2018
Poster and Oral Session Judge Undergraduate Research Symposium, UIUC, Apr 2017

PROFESSIONAL AFFILIATIONS

Aug 2020-Present: American Chemical Society (ACS)
Aug 2020-Present: American Institute of Chemical Engineers (AIChe)
Jan 2019-Jan 2020: American Society of Microbiology (ASM), Student Member
Oct 2018-Oct 2019: American Association for the Advancement of Science (AAAS)
May 2017-May 2018: American Heart Association (AHA)
Jan 2016-Present: Materials Research Society (MRS), Student Member
Feb 2016-Present: Phi Kappa Phi Honor Society Member
Sep 2015-Present: Biomedical Engineering Society, Student Member

ACADEMIC REFERENCES

- Dr. Dipanjan Pan, Professor, Ph.D., Professor of Radiology and Chemical, Biochemical Environmental Engineering (CBEE), Director, Imaging Probe Development Characterization Resources, Radiology, Director, Nano-fabrication Characterization Core, CBOTH, Associate Director and Liaison for UMB-UMBC Engineering and Medicine Initiative, University of Maryland, Baltimore County University of Maryland Baltimore School of Medicine (Previously at UIUC)
  Email: dipanjan@som.umaryland.edu

- Dr. Shuming Nie, Professor, Ph.D., Grainger Distinguished Chair in Bioengineering, Bioengineering Department, Beckman Institute, University of Illinois at Urbana Champaign
  Email: nies@illinois.edu

- Dr. Catherine Murphy, Ph.D., Larry Faulkner Endowed Chair in Chemistry, University of Illinois at Urbana Champaign
  Email: murphycj@illinois.edu

- Dr. Joseph Wu, M.D., Ph.D., Director of the Cardiovascular Institute, Stanford University
  Email: joewu@stanford.edu

- Dr. R. Bhargava, Professor, Ph.D., Founder Professor of Engineering, Director of the Cancer Center, Bioengineering Department, Beckman Institute, University of Illinois at Urbana Champaign
  Email: rxb@illinois.edu