

Mentor Meeting Schedule
Membrane Science, Engineering & Technology (MAST) Center Tuesday,
November 6, 2018
Session #1: 9:30-10:00 am

- 1. *Imaging and Quantifying Chemically Modified Polymer Membrane Properties at Nanoscale*** **Project #15-3**
Faculty: Wen Zhang, NJIT Civil & Environmental Engineering Somenath Mitra, NJIT Chemistry & Environmental Science
Graduate Student: Wanyi Fu, NJIT Chemical and Environmental Sci.
Samar Azizighannad, NJIT Chemical & Environmental Science
Primary Mentor: Tina Carbrello, Millipore
Project End Date: 6/30/19
- 2. *Membrane-based Removal of Ammonia from Waste Stream and its Recovery*** **Project #16-1**
Faculty: Kamalesh Sirkar, NJIT Chemical, Biological & Pharmaceutical Engineering
Post Doc: John Chau, NJIT Chemical, Biological & Pharmaceutical Engineering
Graduate Student: Philip Aligwe, NJIT Chemical Biological & Pharmaceutical Engineering
Primary Mentors: W.R. Grace
Project End Date: 6/30/19
- 3. *Nanopore Tuning in Lyotropic Liquid Crystal Membrane Materials for Optimized Transport and Selective Rejection of CWA Stimulants of Interest to DTRA*** **Project #16-3 Water Vapor**
Faculty: Richard Noble, CU Chemical & Biological Engineering
Douglas Gin, CU Chemical & Biological Engineering Graduate Student: Greg Dwulet, CU Chemistry & Biochemistry
Primary Mentor: Tracee Whitfield, DTRA
Project End Date: 6/30/19
- 4. *Assessment of Virus Clearance for Biopharmaceutical Manufacture*** **Project #15-6**
Faculty: Ranil Wickramasinghe, UA Chemical Engineering Xianghong Qian, UA Biomedical Engineering
Graduate Student: Namila, UA Biomedical Engineering
Primary Mentor: Steven Traylor/ Tung Nguyen/ Melissa Holstein, Bristol Meyers Squibb
Project End Date: 06/29/19
- 5. *Novel Fouling Resistant Polymeric Membranes*** **Project #18-3**
Faculty: Victor Bright, CU Mechanical Engineering
Steven George, CU Chemistry
Alan Greenberg, CU Mechanical Engineering
Graduate Students: Brian Welch, CU Chemistry
Olivia McIntee, CU Mechanical Engineering
Primary Mentor: Eliot Fang, Sandia
Project End Date: 07/31/21
- 6. *Coupled UV-Membrane and Oxidant Membrane Process for Biofouling and Enhanced Flux in Water Reclamation Applications*** **Project #17-1 Decreased**
Faculty: Karl Linden, CU Civil & Environmental Engineering
Post-Doc: Joanna Murphy, CU Environmental Engineering
Primary Mentor: Ashley Pifer, Garver
Project End Date: 12/31/2019

Note: Information presented from these projects is considered to be proprietary in nature, and the terms of center membership apply.

Session #2: 10:00-10:30 am

- 7. Adsorptive and Destructive Mixed Matrix Membranes for CB Protection Project #15-1**
Faculty: Kamalesh Sirkar, NJIT Chemical, Biological & Pharmaceutical Engineering
Boris Khusid, NJIT Chemical, Biological & Pharmaceutical Engineering
Post Doc: John Chau, NJIT Chemical, Biological & Pharmaceutical Engineering Graduate Student:
Yufeng Song, NJIT Chemical, Biological & Pharmaceutical Engineering
Primary Mentor: Tracee Whitfield, DTRA
Project End Date: 6/30/19
- 8. New Real-Time Methodology for Detection of Fouling in Gas Separation Membranes Project #15-4**
Faculty: Victor Bright, CU Mechanical Engineering
Juliet Gopinath, CU Bioengineering
Alan Greenberg, CU Mechanical Engineering
Post Doc: Mo Zohrabi, CU Electrical Engineering
Graduate Students: Omkar Supekar, CU Mechanical Engineering
Danielle Park, CU Mechanical Engineering
Primary Mentor: Tina Carbrello, MilliporeSigma
Project End Date: 6/30/19
- 9. Robustness and Plugging of Virus Filters Project #16-5**
Faculty: Ranil Wickramasinghe, UA Chemical Engineering Xianghong
Qian, UA Biomedical Engineering Graduate Student: Da Zhang, UA Chemical
Engineering
Primary Mentor: Daniel Strauss, Asahi Kasei Project End Date:
6/30/19
- 10. Integrated Solar Seawater Splitting for Hydrogen Production Project #18-4**
Faculty: Wen Zhang, NJIT Civil & Environmental Engineering
Kamalesh Sirkar, NJIT Chemical, Biological & Pharmaceutical Engineering
Graduate Student: TBD
Primary Mentor: Katsujinken Foundation
Project End Date: 6/30/20

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Session #3: 10:30-11:00 am

- 11. Graphene Oxide (GO) Membrane-based Breathable Fabric** **Project #16-2**
Faculty: Kamalesh Sirkar, NJIT Chemical, Biological & Pharmaceutical Engineering
Zafar Iqbal, NJIT Chemistry & Environmental Science
Post-Doc: John Chau, NJIT Chemical, Biological & Pharmaceutical Engineering
Graduate Student: Cheng Peng, NJIT Material Science & Engineering
Primary Mentor: Tracee Whitfield, DTRA
Project End Date: 6/30/19
- 12. Novel Nanofiltration Membranes for Isolation of Pharmaceutical Compounds** **Project #17-6**
Faculty: Kamalesh Sirkar, NJIT Chemical, Biological & Pharmaceutical Engineering
Post Doc: John Chau, NJIT Chemical, Biological & Pharmaceutical Engineering
Primary Mentor: Ken Pennisi, Compact Membrane Systems
Project End Date: 8/30/19
- 13. Mapping Membrane Tortuosity Using High-Throughput 3D Nanoparticle Tracking** **Project #18-2**
Faculty: Dan Schwartz, CU Chemical/Biochemical Engineering
Graduate Student: Yu Cai, CU Chemical/Biochemical Engineering
Primary Mentor: Millipore/3M/Gore
Project End Date: 6/30/21
- 14. Modeling Tools for Membrane Process** **Project #17-5**
Faculty: David Ford, UA Chemical Engineering Graduate
Xianghong Qian, UA Biomedical Engineering
Paul Millett, UA Mechanical Engineering
Student: Rosario Cervellere, UA Mechanical Engineering
Primary Mentor: Derek Dehn, 3M
Project End Date: 1/31/20
- 15. Understanding Virus Prefilters** **Project #18-5**
Faculty: Ranil Wickramasinghe, UA Chemical Engineering
Xianghong Qian, UA Biomedical Engineering
Andrew Zydny, PSU Chemical Engineering
Student: Raheleh Daneshpour, UA Chemical Engineering
Primary Mentor: BMS/Asahi/Millipore/3M
Project End Date: 8/31/21

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Session #4: 11:00-11:30 am

- 16. *Selective Separation of Industrial Relevant Metal Ions from High TDS Water Using Wafer-Enhanced Electrodeionization*** **Project #17-4**
Faculty: Jamie Hestekin, UA Chemical Engineering
Graduate Student: Humeyra Ulusoy-Erol, UA Chemical Engineering
Primary Mentor: Industrial Advisory Board
Project End Date: 1/31/20
- 17. *Membrane Filtration for Wastewater Treatment*** **Project #17-7**
Faculty: Ranil Wickramasinghe, UA Chemical Engineering
Xianghong Qian, UA Biomedical Engineering
Marty Matlock, UA Biological & Agricultural Engineering
Graduate Student: Zahra Anari, UA Chemical Engineering
Primary Mentor: Todd Low, Hawaii Department of Agriculture
Project End Date: 12/31/18
- 18. *Project End Date: 6/30/19*** **Project #17-3**
Development and Characterization of Composite Membranes for Use in Countercurrent Solvent Extraction
Faculty: Kamallesh Sirkar, NJIT Chemical, Biological & Pharmaceutical Engineering
Post-Doc: John Chau, NJIT Chemical, Biological & Pharmaceutical Engineering
Graduate Student: Lydia Rodrigues, NJIT Chemical, Biological & Pharmaceutical Engineering
Primary Mentor: John Ahern, Los Alamos National Laboratory
Project End Date: 12/31/19

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