### Spring 2013 Graduate School Degree Recipients

**Master of Science**

<table>
<thead>
<tr>
<th>Graduates</th>
<th>Advisors</th>
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<tbody>
<tr>
<td>Qirui Fan</td>
<td>Jessica Winter</td>
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<tr>
<td>Viraj Modak</td>
<td>Barbara Wyslouzil</td>
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<tr>
<td>Hrishikesh Munj</td>
<td>David Tomasko</td>
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<tr>
<td>Alexander Roth</td>
<td>Andre Palmer</td>
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<tr>
<td>Hui Yang</td>
<td>Liang-Shih Fan</td>
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<td>Lin Zhao</td>
<td>Winston Ho</td>
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<td>Jeevan Baretto</td>
<td>David Wood</td>
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<td>Brian Belcik</td>
<td>Andre Palmer</td>
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**Doctor of Philosophy**

<table>
<thead>
<tr>
<th>Graduates</th>
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<tr>
<td>Yinming Du</td>
<td>Shang-Tian Yang</td>
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<tr>
<td>Berrin Kursun</td>
<td>Bhavik Bakshi</td>
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<tr>
<td>Meimei Liu</td>
<td>Shang-Tian Yang</td>
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<tr>
<td>Laura Merugula</td>
<td>Bhavik Bakshi</td>
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<tr>
<td>Nihar Phalak</td>
<td>Liang-Shih Fan</td>
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<tr>
<td>Kartik Ramasubramanian</td>
<td>Winston Ho</td>
</tr>
<tr>
<td>Yanan Zhao</td>
<td>Winston Ho</td>
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**Dissertation:**
- Yinming Du: High-yield and high-titer n-butanol production from lignocellulosic feedstocks by metabolically engineered Clostridium tyrobutyricum
- Berrin Kursun: Towards Design of Sustainable Energy Systems in Developing Countries: Centralized and Localized Options
- Meimei Liu: Expansion and Osteogenic Differentiation of Human Amniotic Fluid Derived Stem Cells
- Nihar Phalak: Calcium Looping Processes for Pre- and Post-Combustion Carbon Dioxide Capture Applications
- Kartik Ramasubramanian: An experimental & process modeling study on CO2-selective membranes for fuel cell Hydrogen purification & fluegas carbon capture
- Yanan Zhao: Carbon dioxide-selective Membranes Containing Sterically Hindered Amines

### Autumn 2013 Graduate School Degree Recipients

**Master of Science**

<table>
<thead>
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<tbody>
<tr>
<td>Cassandre Dorcena</td>
<td>Jessica Winter</td>
</tr>
</tbody>
</table>
Doctor of Philosophy

Graduates

Zi Tong
Winston Ho

Patrick Bennett
Shang-Tian Yang
Dissertation: Solid State Fermentation in a Spouted Bed Reactor and Modeling Thereof

Anthony Duong
Barbara Wyslouzil
Dissertation: Electrohydrodynamic Spray Fabrication of Microparticles and Nanoparticles for Use as Biomedical Delivery Vehicles

Kalpesh Mahajan
Jessica Winter
Dissertation: Development of Nanodevices for Bio-detection, Separation, Therapy, and Mechanotransduction

Brandon Miller
Jeffrey Chalmers
Dissertation: Quantitative Multiparameters Analysis of Fluorescently-Stained Negatively Enriched Peripheral Blood from Cancer Patients

Harshad Pathak
Barbara Wyslouzil
Dissertation: Nucleation and Droplet Growth During Co-condensation of Nonane and D2O in a Supersonic Nozzle

Ibrahim Soykal
Umit Ozkan
Dissertation: Characterization of cobalt and cerium coordination environments for catalytic steam reforming of bio-derived liquids
Spring 2013 Seminar Series:
1/10 Nicholas Brunelli, Postdoctoral Fellow, School of Chemical & Biomolecular Engineering, Georgia Institute of Technology, “The Sub-Nanometer Length Scale: Exploring Fundamental Challenges in Aerosols & Catalysis”

1/31 Elijah Thimsen, Postdoctoral Associate, Chemical Engineering and Materials Science and Mechanical Engineering, University of Minnesota, “Atomic Layer Deposition of Cu$_2$ZnSnS$_4$ (CZTS) For Nanostructured Solar Cells and Fundamental Materials Research”

2/7 Jason Burdick, Associate Professor, Department of Bioengineering, University of Pennsylvania, “Injectable Hydrogels with Engineered Properties and Molecule Release for Cardiac Repair”

2/14 Qing Peng, Research Scientist, Electrical and Computer Engineering Department, Duke University, “Chemical Assembly of Materials at the Molecular Level”

2/21 James A. Dumesic, Steenbock Professor and Michel Boudart Professor, Chemical and Biological Engineering, University of Wisconsin-Madison, “Strategies for Catalytic Conversion of Lignocellulosic Biomass to Fuels and Chemicals”

2/28 Jim Wallace, Professor Emeritus, Director, Burgers Program for Fluid Dynamics, Department of Mechanical Engineering, University of Maryland, “Highlights of Fifty Years of Turbulent Boundary Layer Research”

3/7 Nitash Balsara, Professor, Department of Chemical Engineering, University of California, Berkeley, “Nanostructured Block Copolymers for All-Solid Lithium Batteries”

3/21 Linda Broadbelt, Sarah Rebecca Roland Professor and Chair, Department of Chemical and Biological Engineering, Northwestern University, “Designing Reaction Pathways to Novel Chemicals and Materials Using Kinetic Modeling”

4/4 Mark Davis, Lowrie Lecture I, Warren and Katharine Schlinger Professor, California Institute of Technology, Chemical Engineering, Member, City Hope Comprehensive Cancer Center, Experimental Therapeutics Program, “Fighting Cancer with Nanoparticle Medicines: The Nanoscale Matters!” E0001 Scott Lab, Reception in E100 Scott Lab

4/5 Mark Davis, Lowrie Lecture II, “The Rise and Realization of “Molecular” Chemical Engineering” 10:00 a.m., Physics Research Building 1080

4/11 Monica Burdick, Assistant Professor, Chemical and Biomolecular Engineering, Ohio University, “Identification of E-selectin Ligands on Breast Cancer Cells: Implications for Bloodborne Metastasis”

4/18 Peter Tessier, Assistant Professor, Chemical & Biological Engineering, Rensselaer Polytechnic Institute, “Antibodies by Design”

Autumn 2013 Seminar Series:
8/22 Dan Luss, Cullen Professor of Engineering, Department of Chemical and Biomolecular Engineering, University of Houston, “Application of Chemical Reaction Engineering to Reducing Automobile Emissions”

8/29 Celeste Nelson, Associate Professor, Department of Chemical and Biological Engineering, Princeton University, “Forcing Tissues to Build Themselves”

9/5 Laura Segatori, Assistant Professor, Chemical and Biomolecular Engineering, Bioengineering, Biochemistry and Cell Biology, Rice University, “Reprogramming the Proteostasis Network to Enhance Cellular Clearance Pathways”

9/19 Mahmoud El-Halwagi, Professor and Holder of the McFerrin Professorship, Artie McFerrin Department of Chemical Engineering, Texas A&M University, “Sustainable Process Design Through Mass and Property Integration”

9/26 Sanat Kumar, Professor and Chair, Department of Chemical Engineering, Columbia University, “Nanoparticle Amphiphiles”

10/3 Jodie Lutkenhaus, Assistant Professor, Artie McFerrin Department of Chemical Engineering, Texas A&M, “Temperature-Responsive Polyelectrolyte Multilayer Films and Microtubes”

10/10 Michael Boehm, Postdoctoral Research Fellow, School of Chemical Engineering, The University of Queensland, Brisbane, “The Physics of Eating: How Do We Research Oral Processing?”

10/17 Sheldon Park, Assistant Professor, Department of Chemical and Biological Engineering, University of Buffalo, “Engineered Molecular Recognition in Biotechnology and Medicine”

10/24 Doraiswami Ramkrishna, H.C. Peffer Distinguished Professor, School of Chemical Engineering, Purdue University, “On Dynamic Modeling of Metabolism. The Cybernetic Approach.”


11/14 Randall Winans, Senior Scientist, X-ray Science Division, Advanced Photon Source, Argonne National Laboratory, “In Situ X-ray Scattering of Catalytic Transformations”

11/21 Susannah Scott, Professor, Chemical Engineering, Chemistry and Biochemistry, University of California Santa Barbara, “Creating Catalytically Active Sites on Oxide Surfaces with Molecular Precision”
Graduate Student Awards 2013

Former UG student Kunal Parikh and Winter lab alumnus received an NSF graduate research fellowship. He is pursuing a joint PhD/MBA at Hopkins.

Ehab Ammar: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet

Samuel Bayham: Special Recognition at the Lowrie Honors Banquet

Yinming Du: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet

Tony Duong: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet

Rebecca Hanes: Won second place in the student paper competition at the International Symposium for Sustainable Systems and Technology (ISSS)

Daniel Knight: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet

Meimei Liu: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet

Siwei Luo: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet

Kalpesh Mahajan: Special Recognition at the Lowrie Honors Banquet

Viraj Modak: Special Recognition at the Lowrie Honors Banquet

Harshad Pathak: Special Recognition at the Lowrie Honors Banquet, Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet

Nihar Phalak: Special Recognition at the Lowrie Honors Banquet

Kartik Ramasubramanian: Won the AIC Outstanding Graduate Student Award at the Lowrie Honors Banquet

Deepika Singh: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet, Received the 2013 Kokes Graduate Student Award at the 23rd North American Meeting of the Catalysis Society, Won the 2013 AIChE Catalysis and Reaction Engineering Division Travel award to attend the Annual National AIChE meeting in San Francisco
Ilgaz Soykal: Special Recognition at the Lowrie Honors Banquet, Received the 2013 Kokes Graduate Student Award at the 23rd North American Meeting of the Catalysis Society

Andrew Tong: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet

Lin Zhao: Special Recognition at the Lowrie Honors Banquet, Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet, Won Outstanding Poster Paper Award in the poster paper competition at the Annual Meeting of the North American Membrane Society (NAMS) in Boise, Idaho

Yanan Zhao: Outstanding Graduate Award for Academic Achievement at the Lowrie Honors Banquet