Miguel A. Modestino

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SUMMARY OF CAREER HIGHLIGHTS

- Advised 30 students, including 3 postdoctoral researchers, 6 Ph.D. students, 4 M.S. students, and 18 undergraduate students.
- National Science Foundation, CAREER Award 2019.
- Raised $1.5 M in research funding from national and international foundations, companies and government agencies.
- Authored 40 publications in peer-reviewed scientific journals, including 15 articles where I am corresponding author and 6 articles that were featured in the journal's cover page. Articles were published in leading journals in my fields of research: Energy (Energy and Environmental Science), Polymers (Macromolecules/ACS Macro Letters) and Reaction Engineering (Reaction Chemistry and Engineering/Lab on a Chip) and Interdisciplinary Journals (Proceedings of the National Academy of Science/Angew. Chem./JACS). Articles include two invited reviews on Solar-Fuels and an invited perspective in Organic Electrosynthesis.
- Presented 36 invited lectures, and authored 26 contributed presentations in national and international conferences, universities and research institutions.
- Co-inventor in 6 patent applications. Co-founder and technical advisor of two NYU spin-off companies. Awarded the first prize at the NYU 300K Entrepreneurship Challenge Technology Venture Competition, the first prize in the University Startup Worldcup Green Tech Track and a Powerbridge NY Grant.
- Named MIT Technology Review Innovator Under 35 in Latin America and Globally, won Doctoral New Investigator ACS Petroleum Research Fund Award, Energy and Environmental Science Reader's Choice Award and H&M Foundation Global Change Award. Work featured in 27 press releases in national and international media outlets including Brooklyn Daily Eagle, PBS, Vogue and Forbes.
- Co-organized international conference on Pathways for Solar-Hydrogen Technologies and co-edited special issue on Solar Fuels in Journal of Physics D: Applied Physics. Served as reviewer for US Department of Energy, US National Science Foundation, the Netherlands Organization for Scientific Research and the Swiss National Science Foundation.

EDUCATION

University of California, Berkeley, CA
Ph.D. in Chemical Engineering (2013)
Management of Technology Certificate

Massachusetts Institute of Technology, Cambridge, MA
Master in Science in Chemical Engineering Practice (2008)
Bachelor of Science in Chemical Engineering (2007), Minors in Chemistry and Economics

EMPLOYMENT HISTORY

New York University, New York, NY, USA (Fall 2016 – current)

- Assistant Professor of Chemical and Biomolecular Engineering (January 2017 – current)

Sunthetics Inc, New York, NY, USA (Summer 2018 – current)

- Co-founder and Technology Advisor of NYU spin-off company focused on the development of a sustainable electrochemical manufacturing processes and equipment.

ReactPower Inc, New York, NY, USA (Spring 2019 – Summer 2019)

- Co-founder and Technology Advisor of NYU spin-off company focused on the development of Aluminum-based nanomaterial for thermal enhanced oil recovery.

École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland (Summer 2013 – Fall 2016)

- Postdoctoral Fellow at the Laboratory of Optics (Prof. Demetri Psaltis) and Laboratory of Applied Photonics Devices (Prof. Christophe Moser). Project manager of the Nanotera – SHINE project (http://shine.epfl.ch)

University of California and Lawrence Berkeley National Laboratory, Berkeley, CA, USA (Fall 2008-Spring 2013)

- Graduate student research assistant under the supervision of Prof. Rachel Segalman. Work on the self-assembly of nanocrystal in polymer matrices, and characterization of transport and structural properties of hybrid inorganic/polymer membranes for solar-fuels applications.
- Teaching Assistant for Chemical Kinetics and Reactor Design (Spring 2010) and Polymer Science and Technology (Fall 2011).

Massachusetts Institute of Technology, Cambridge, MA, USA (Fall 2003-Spring 2008)

- Teaching Assistant in the Chemical Engineering Department for Chemical Engineering Projects Laboratory. (Spring 2008)
- Research Assistant in the Department of Chemical Engineering, under the supervision of Prof. Paula Hammond. Work related with the application of layer-by-layer film assembly method, to build novel materials for optical, catalytic, and biomedical applications. (Fall 2003-Spring 2007)
- Teaching Assistant in the Chemistry Department for Organic Chemistry. (Fall 2006)

- Tutor in the Chemical Engineering Department for Introduction to Chemical Engineering. (Fall 2005)

TechActivator, Berkeley, CA, USA (Spring 2011-Fall 2012)

- Co-founder and director of this start-up in UC Berkeley that focuses on accelerating the commercialization of technology developed in top research institutions.

British Petroleum Company, Naperville, IL, USA (Summer 2008)

- One month internship as part of the David H. Koch School of Chemical Engineering Practice. Worked in small teams to develop thermodynamic models to predict stability of fuel formulations.

Novartis Pharma AG, Basel, Switzerland (Summer 2008)

- Two month internship as part of the David H. Koch School of Chemical Engineering Practice. Worked in small teams to analyze potential avenues for optimizing Novartis packaging strategy, and perform technical and economical feasibility analyses of continuous manufacturing processes within the company.

GRANTS AND CONTRACTS

Current Awards:

1. **National Science Foundation**
   CAREER: Understanding Multiscale Mass Transport in Organic Electrosynthesis: Towards a Sustainable Pathway to Nylon Precursors
   Pending Funds: $634,650
   04/01/2020 – 03/31/2025
   Single PI

2. **National Science Foundation**
   Planning Grant: Engineering Research Center for the Electrification of the Chemical Industry (CECI)
   Pending Funds: $90,457
   11/01/2019 – 10/31/2020
   Co-PI in collaboration with Lead-PI: Eray Aidyl (NYU Tandon), Co-PI: Yury Dvorkin (NYU Tandon), and Co-PI: Sanat Kumar (Columbia University)

3. **PowerBridge New York:**
   Improved manufacturing process for adiponitrile
   Funds Granted: $150,000
   05/01/2019 – 05/14/2020
   Single PI

4. **University Research Challenge Fund, NYU:**
   Hybrid photocatalytic materials for light-driven water treatment.
   Pending Funds: $15,000.

6/01/2019-11/30/2019
Lead-PI in collaboration with Co-PI: Andrea Silverman (NYU Tandon)

5. **Empire State Development, NYSTAR Technology Transfer Program:**
   Scale-up and Optimization of Adiponitrile Electrosynthesis Reactors.
   Funds Granted: $62,500
   06/01/2019 – 12/31/2020
   Single PI (Technology transfer grant in collaboration with Sunthetics Inc.)

6. **ACS Petroleum Research Fund, Doctoral New Investigator Award**:
   Ionic Liquid-Polymer Gel Electrolytes for Electrochemical Olefin Separations.
   Funds Granted: $110,000.
   09/01/2019 – 08/31/2021
   Single PI

7. **VentureWell:**
   Sunthetics.
   Funds Granted: $25,000.
   03/01/2018 – 12/31/2019
   Single PI (Technology transfer grant for development of Sunthetics Inc.)

8. **MD5 Launch:**
   H2POWdER Project.
   Funds Granted: $190,000.
   05/01/2018 – 04/31/2019
   Single PI (Part of the NYU MD5 Program)

9. **ExxonMobile:**
   Unrestricted Research Grant.
   Funds Granted: $20,000
   01/09/2018 – Indefinite
   Single PI

10. **Swiss National Science Foundation**:
    Multiphase Flow Electrochemical Reactors
    Funds Granted: $ 256,937 (out of CHF 1,521,856 grant total).
    01/01/2018 – 12/31/2021
    Co-PI in collaboration with (Lead-PI: Demetri Psaltis, EPFL, Co-PI: Petros Koumatsaks, ETHZ)

11. **National Science Foundation:**
    RAPID: Transportable Energy Storage for Enhancing Power Grid Resiliency to Natural Disasters
    Funds Granted: $30,951 (out of $61,902 grant total).
    10/01/2017 – 09/30/2018
    Co-PI in collaboration with Lead-PI: Yury Dvorkin (NYU Tandon)

12. **H&M Foundation, Global Change Award:**
    SolarTextiles.
    Funds Granted: $155,000 (out of $310,000 grant total)
    07/01/2017 – Indefinite.
    Lead-PI in collaboration with Co-PI: Sophia Haussener, EPFL

SCHOLARLY WORK

*Journal publications at NYU (‡ co-first authorship, *corresponding author):*

15. **D. E. Blanco**, **A. Z. Dookhith** and M. A. Modestino*, Controlling Selectivity in the Electrocatalytic Hydrogenation of Adiponitrile through Electrolyte Design, *ACS Sustainable Chemistry & Engineering*, 2020, **8**, 9027-9034. (IF = 7.632)

14. **A. Angulo**, P. van der Linde, H. Gardeniers, M. Modestino* and D. Fernández Rivas*, Influence of Bubbles on the Energy Conversion Efficiency of Electrochemical Reactors, *Joule*, 2020, **4**, 555-579. (Invited Review) (IF = 27.054)

13. **Katzenberg, A.,** Chowdhury, A., Fang, M., Weber, A. Z., Okamoto, Y., Kusoglu, A., & Modestino, M. A.* Highly Permeable Perfluorinated Sulfonic Acid Ionomers for Improved Electrochemical Devices: Insights into Structure–Property Relationships. *Journal of the American Chemical Society*. 2020. 142, **8**, 3742–3752. (Journal Cover) (IF = 14.612)

12. **Katzenberg, A., Raman, A., Schnabel, N. L., Quispe, A.** L., Silverman, A. I., & Modestino, M. A.* Photocatalytic hydrogels for removal of organic contaminants from aqueous solution in continuous flow reactors. *Reaction Chemistry & Engineering*. 2020. **5**, 377-386. (IF = 3.441)

11. Mark T. Spitler,* Miguel A. Modestino, Todd G. Deutsch, Chengxiang X. Xiang, James R. Durrant, Daniel V. Esposito, Sophia Haussener, Stephen Maldonado, Ian D. Sharp, Bruce A. Parkinson, David S. Ginley, Frances A. Houle, Thomas Hannappel, Nathan R. Neale, Daniel G. Nocera and Paul C. McIntyre. Practical challenges in the development of photoelectrochemical solar fuels production. *Sustainable Energy Fuels*, 2020, **4**, 985-995. (IF = 5.503)

10. **Blanco, D. E., Prasad, P. A., Dunningan, K.**, & Modestino, M. A.* Insights into membrane-separated organic electrosynthesis: the case of adiponitrile electrochemical production. *Reaction Chemistry & Engineering*, 2020, *5*(1), 136-144. (IF = 3.441)

9. Peñas, P., van der Linde, P., Vijselaar, W., van der Meer, D., Lohse, D., Huskens, J., Modestino, M.A., Rivas, D. F.* (2019). Decoupling gas evolution from water-splitting electrodes. Journal of The Electrochemical Society, 166(15), H769-H776. (IF = 3.120)

8. **D. E. Blanco, B. Lee**, M. A. Modestino*. Optimizing Organic Electrosynthesis through Controlled Voltage Dosing and Artificial Intelligence. PNAS, 2019, *116*(36), 17683-17689. (IF = 9.580)

7. E. Chinello,* M. A. Modestino, J.W. Schüttauf, L. Coulot, M. Ackermann, F. Gerlich, A. Faes, D. Psaltis and C. Moser. *A comparative performance analysis of stand-alone, off-*

grid solar-powered sodium hypochlorite generators. RSC Adv., 2019, 9, 14432-14442 (IF = 3.119)

6. John Dwyer, Elizabeth Juarez Diaz, Thomas E. Webber, **Adlai Katzenberg**, Miguel Modestino and Eray Aydil*, *Quantum confinement in few layer SnS nanosheets*, Nanotechnology, 30 (2019) 245705 (IF = 3.404)

5. **D. E. Blanco** and M. A. Modestino*, *Organic Electrosynthesis for Sustainable Chemical Manufacturing*, Trends in Chemistry, 2019, 1, 1, 8-10 (Invited perspective in inaugural issues) (IF = N/A)

4. **Daniela E. Blanco**, **Aaliyah Z. Dookhith** and Miguel A. Modestino*. *Enhancing selectivity and efficiency in the electrochemical synthesis of adiponitrile*. React. Chem. Eng., 2019, 4, 8-16. (Journal Cover) (IF = 3.441)

3. Shane Ardo,* David Fernandez Rivas,* Miguel Modestino,* Verena Schulze Greiving,* Fatwa F. Abdi, Esther Alarcon llado, Vincent Artero, Katherine Ayers, Corsin Battaglia, Jan-Philipp Becker, Dmytro Bederak, Alan Berger, Francesco Buda, Enrico Chinello, Bernard Dam, Valerio Di Palma, Tomas Edvinsson, Katsushi Fujii, Han Gardeniers, Hans Geerlings, S. Mohammad H. Hashemi, Sophia Haussener, Frances Houle, Jurriaan Huskens, Brian D. James, Kornelia Konrad, Pramod Patil Kunturu, Detlef Lohse, Bastian Mei, Eric L. Miller, Gary Moore, Jiri Muller, Katherine L. Orchard, Timothy E. Rosser, Fadl Saadi, Jan-Willem Schüttauf, Brian Seger, Stafford W. Sheehan, Wilson A. Smith, Joshua Spurgeon, Maureen Tang, Roel van de Krol, Peter C.K. Vesborg, and Pieter Westerik. *Pathways to Electrochemical Solar-Hydrogen Technologies*. Energy and Environmental Science, 2018, 11, 2768-2783 (Journal Cover) (IF = 30.289)

2. P. Hadikhani, S.M.H. Hashemi, G. Balestra, M.A. Modestino, F. Gallaire, and D. Psaltis*. *Inertial manipulation of bubbles in rectangular microfluidic channels*. Lab on a Chip, 2018, 18, 1035-1046. (Journal Cover) (IF = 6.774)

1. Enrico Chinello,* Miguel A. Modestino, Laurent Coulot, Mathieu Ackermann, Florian Gerlich, Demetri Psaltis, and Christophe Moser*. A 25.1% efficient stand-alone solar chlor-alkali generator employing a micro-tracking solar concentrator*. Global Challenges 1.9 (2017). (IF = 4.306)

Names of students from my group at NYU bolded.

Journal publications prior to NYU:

26. Seyyed Mohammad Hosseini Hashemi,* Matthias Neuenschwander, Pooria Hadikhani, Miguel Modestino, Demetri Psaltis. *Membrane-less micro fuel cell based on two phase flow*. Journal of Power Sources, 2017, 348, 212–218.

25. Miguel A. Modestino,* David Fernandez-Rivas,* Mohammad Hashemi, Han Gardeniers, Demetri Psaltis. *The potential for microfluidics in electrochemical energy systems*. Energy and Environmental Science, 2016, 9 (11), 3381-3391. (IF = 30.289)

24. J.W. Schüttauf,‡* M.A. Modestino,‡* E. Chinello, D. Lambelet, D. Dominé, A.Faes, M. Despeisse, J. Bailat, D. Psaltis, C. Moser, C. Ballif. *Solar-to-hydrogen production at 14.2%*

efficiency with silicon photovoltaics and earth abundant electrocatalysts. J. Electrochem. Soc. 2016, 163, 10, F1177-F1181. (IF = 3.120)

23. Paul Delrot,* Miguel A. Modestino, François Gallaire, Demetri Psaltis and Christophe Moser. *Inkjet printing of viscous monodisperse micro-droplets by laser-induced flow focusing*. Phys. Rev. Applied, 2016, 6, 024003. (Editor's selection article)

22. Miguel A. Modestino,* Mohammad Hashemi, Sophia Haussener. *Mass transport aspects of electrochemical solar-hydrogen generation*. Energy and Environmental Science, 2016, 9 (5), 1533-1551. (IF = 30.289)

21. Adam Weber,* Chengxiang Xiang, Miguel Modestino, Shane Ardo, Sophia Haussener, Kate Fountain, John Stevens, Meenesh Singh, Katie Chen, Shu Hu, Matthew Shaner. *Modeling, Simulation, and Implementation of Solar-Driven Water-Splitting Devices*. Angewandte Chemie, 2016, 128 (42), 13168-13183.

20. Marcin S. Zielinski, Jae-Woo Choi, Thomas LaGrange, Miguel A. Modestino, S. Mohammad H. Hashemi, Ye Pu, Susanne Birkhold, Jeffrey A. Hubbell, and Demetri Psaltis*. *Hollow Mesoporous Plasmonic Nanoshells Enhancing Solar Vapor Generation*. Nano Letters 16 (4), 2159-2167.

19. Miguel A. Modestino*, Mikael Dumortier, Mohammad Hashemi, Sophia Haussener, Demetri Psaltis, Christophe Moser. *Vapor-fed microfluidic hydrogen generator*. Lab on a Chip, 2015, 15, 2287-2296. (IF = 6.774)

18. Mohammad Hashemi, Miguel A. Modestino, Demetri Psaltis*. *A membrane-less electrolyzer for hydrogen production across the pH scale*. Energy and Environmental Science, 2015, 8, 2003-2009. (Invited cover and top scoring article in Energy and Environmental Science). (IF = 30.289)

17. Claudia A. Rodriguez, ‡ Miguel A. Modestino*, ‡ Demetri Psaltis, Christophe Moser. *Design and cost considerations of practical solar-hydrogen generators*. Energy and Environmental Science, 2014. 7 (12), 3828-3835 (EES Readers' Choice Award) (IF = 30.289)

16. Miguel A. Modestino*, Sophia Haussener*. *An Integrated Device View on Photo-Electrochemical Solar-Hydrogen Generation*. Annual Review of Chemical and Biomolecular Engineering, 2015, 6 (1), 13-34. (Invited Review)

15. Frances Allen, Luis Comolli, Ahmet Kusoglu, Miguel A. Modestino, Andrew Minor, Adam Weber*. *Morphology of Hydrated As-Cast Nafion Revealed through Cryo Electron Tomography*. ACS Macro Letters, 2015, *4* (1), 1–5. (Journal Cover) (IF = 6.131)

14. Eun Cho, Christopher M. Evans, Emily C. Davidson, Megan L. Hoarfrost, Miguel A. Modestino, Rachel A. Segalman, and Jeffrey J. Urban*. *Enhanced Water Vapor Blocking in Transparent Hybrid Polymer–Nanocrystal Films*. ACS Macro Letters, 2015, *4* (1), pp 70–74 (IF = 6.131)

13. Pepa Cotanda, Guillaume Sudre, Miguel A. Modestino, Xi Chen, Balsara, Nitash*. *High Anion Conductivity and Low Water Uptake of Phosphonium Containing Diblock Copolymer Membranes*. Macromolecules, 2014, *47* (21), pp 7540–7547 (IF = 5.914)

12. Miguel A. Modestino, Karl A. Walczak, Alan Berger, Christopher Evans, Sophia Haussener, Carl Koval, John S. Newman, Joel Ager, Rachel A. Segalman*. *Robust production of purified H_2 in a stable, self-regulating, and continuously operating solar fuel generator*. Energy Environ. Sci., 2014, 7 (1), 297-301. (IF = 30.289)

11. Miguel A. Modestino, Rachel A. Segalman*. *Artificial Solar Fuel Generators*. The Bridge, Winter 2013, National Academy of Engineering

10. Miguel A. Modestino, ‡ Camilo Diaz-Botia, ‡ Tyler S. Matthews, Rafael Gomez-Sjoberg, Joel Ager*, Rachel A. Segalman*. *Integrated microfluidic test-bed for energy conversion devices*. Phys. Chem. Chem. Phys. 2013, 15, 7050-7054.

9. Miguel A. Modestino,* Frances I. Allen, Devproshad K. Paul, Shudipto Dishari, Stephanie A. Petrina, Michael A. Hickner, Kunal Karan, Andy M. Minor, Adam Z. Weber and Rachel A. Segalman. *Self-Assembly and Transport Limitations in Confined Nafion Films*. Macromolecules, 2013, *46* (3), pp 867–873. (IF = 5.914)

8. Yanika Schneider, Miguel A. Modestino, Robert W. Hess, Bryan McCulloch, Rachel A. Segalman*. *Ionic Conduction in Nanostructured Membranes based on Polymerized Protic Ionic Liquids*. Macromolecules, 2013, *46* (4), pp 1543–1548. (IF = 5.914)

7. Frances I. Allen, Peter Ercius, Miguel A. Modestino, Rachel A. Segalman, Nitash P. Balsara, Andrew M. Minor*. *Deciphering the three-dimensional morphology of free-standing block copolymer thin films by transmission electron microscopy*. Micron; 2013; 44, pp 442-450.

6. Miguel A. Modestino, ‡ Ahmet Kusoglu, ‡ Alexander Hexemer, Adam Z. Weber*, Rachel A. Segalman*. *Controlling Nafion Structure and Properties via Wetting Interactions*. Macromolecules; 2012; 45 (11), pp 4681–4688. (IF = 5.914)

5. Gang Chen, Miguel A. Modestino, Billy K. Poon, Andre Schrotzek, Stefano Marchesini, Rachel A. Segalman*, Alexander Hexemer, Peter H. Zwart. *Structure Determination of Pt-coated Au Dumbbells via Fluctuation X-ray Scattering*. Journal of Synchrotron Radiation; 2012; 19, pp 695-700.

4. Ahmet Kusoglu, ‡ Miguel A. Modestino, ‡ Alexander Hexemer, Adam Z. Weber*, Rachel A. Segalman*. *Subsecond Morphological Changes in Nafion during Water Uptake Detected by Small-Angle X-ray Scattering*. ACS Macro Letters; 2012; *1* (1), pp 33–36. (IF = 6.131)

3. Miguel A. Modestino, Elaine R. Chan, Alexander Hexemer, Jeff J. Urban, Rachel A. Segalman*. *Controlling Nanorod Self-Assembly in Polymer Thin Films*. Macromolecules; 2011; *44* (18), pp 7364–7371. (IF = 5.914)

2. Nicole S. Zacharia, Miguel A. Modestino, Paula T. Hammond*. *Factors Influencing the Interdiffusion of Weak Polycations in Multilayers*. Macromolecules; 2007; *40*(26) pp 9523 – 9528. (IF = 5.914)

1. Nicole S. Zacharia, Dean M. DeLongchamp, Miguel A. Modestino, Paula T. Hammond*. *Controlling Diffusion and Exchange in Layer-by-Layer Assemblies*. Macromolecules; 2007; *40*(5) pp 1598 – 1603. (IF = 5.914)

Invited presentations after joining NYU:

1. Miguel A. Modestino. Designing Electrochemical Processes for Sustainable Chemical Manufacturing. Seminar at Bristol Myers Squibb, USA. July 9th, 2020. (Virtual)
2. Miguel A. Modestino. Designing Electrochemical Processes for Sustainable Chemical Manufacturing. Seminar at Lawrence Berkeley National Lab, USA. July 6th, 2020. (Virtual)
3. Miguel A. Modestino. Designing Electrochemical Materials and Processes for Clean Transportation and Sustainable Chemical Manufacturing. Seminar at Technical University of Eindhoven, The Netherlands. April 23rd, 2020. (Virtual)
4. Miguel A. Modestino. Designing Electrochemical Materials and Processes for Clean Transportation and Sustainable Chemical Manufacturing. Seminar at Center for Nanofunctional Materials, Brookhaven National Laboratory, USA. February 3rd, 2020
5. Miguel A. Modestino. Designing Electrochemical Materials and Processes for Clean Transportation and Sustainable Chemical Manufacturing. Chemical Engineering Department Seminar, Stevens Institute of Technology, Hoboken, NJ, USA. January 31st, 2020
6. Miguel A. Modestino. Designing Electrochemical Materials and Processes for Clean Transportation and Sustainable Chemical Manufacturing. Seminar at Solar Fuels Institute, Helmholtz Zentrum Berlin, Germany. January 8th, 2020.
7. Miguel A. Modestino. Designing Electrochemical Materials and Processes for Clean Transportation and Sustainable Chemical Manufacturing. Seminar at Solar Fuels Institute, Helmholtz Zentrum Berlin, Germany. January 8th, 2020.
8. Miguel A. Modestino. Engineering Electrochemical Manufacturing: From High-Performing Reactors to Separation Processes. Advances, Challenges, and Long-term Opportunities for Electrochemistry. Chemical Science Roundtable Workshop, National Academy of Science, Washington, DC, USA. November 19th, 2019.
9. Miguel A. Modestino. Artificial Photosynthesis Engineering: Designing solar-driven electrochemical reactors for the production of clean fuels and high-value materials. Chemical Engineering Department Seminar, City College of New York, NY, USA. November 4th, 2019
10. Miguel A. Modestino, Daniela E. Blanco. Engineering Organic Electrosynthesis: The Case of Nylon Precursors. Seminar at Invista/Koch Industries. Orange, TX, USA. August 13th, 2019.
11. Miguel A. Modestino. Design considerations of sunlight-driven organic electrosynthetic processes. ACS Spring Meeting, Orlando, FL, USA. April 3rd, 2019.
12. Miguel A. Modestino. Advice for Pursuing Traditional and Nontraditional Careers in Science (Panelist). Energy Nanomaterials, Gordon Research Seminar, Ventura, CA, USA. February 24th, 2019.
13. Miguel A. Modestino. The potential of solar-chemical manufacturing: from clean fuels to fast fashion. University of Oxford's Energy Society, Oxford, UK. November 20th, 2018.
14. Miguel A. Modestino. Engineering a sustainable chemical industry. University of Oxford's Climate Society, Oxford, UK. November 19th, 2018.

15. Miguel A. Modestino. Novel ionomer materials for electrochemical energy conversion devices. Center for Soft Mater Research, Department of Physics, New York University, New York, NY, USA. November 14th, 2018.
16. Miguel A. Modestino. How can startups and corporates collaborate (Panelist). Innovate 46, Swedish Chamber of Commerce. New York, NY, USA. October 10th, 2018.
17. Miguel A. Modestino. Controlling mass transport at electrocatalytic interfaces: Towards air-based water splitting devices. ACS Fall Meeting, Boston, MA, USA. August 22nd, 2018.
18. Miguel A. Modestino. Solar-Fuels Analytical Facility: Required Prototype Formats. Workshop on Photoelectrochemical Solar Fuels Production. Gerischer Electrochemistry Today. Boulder, CO. August 13th, 2018.
19. Miguel A. Modestino. SolarTextiles: Manufacturing textiles with energy from the sun. MIT Technology Review EmTech Caribbean 2018. Santo Domingo, Dominican Republic. May 11th, 2018.
20. Miguel A. Modestino. Controlling Self Assembly and Mass Transport in Artificial Photosynthesis Materials and Devices. University of Oxford's Department of Materials Colloquium, Oxford, UK. April 26th, 2018.
21. Miguel A. Modestino. Artificial Photosynthesis Engineering: Towards Solar-Chemical Reactors. Chemical Engineering Department Seminar, New Jersey Institute of Technology, NJ, USA. April 2nd, 2018.
22. Miguel A. Modestino. Artificial Photosynthesis Engineering: Towards Solar-Chemical Reactors. Chemistry Department Seminar, Lehman College, Bronx, NY, USA. February 21th, 2018.
23. Miguel A. Modestino. Artificial Photosynthesis Engineering: Towards Solar-Chemical Reactors. New York Nanoscience Discussion Group. Department of Chemistry, New York University, New York, NY, USA. January 30th, 2018.
24. Miguel A. Modestino. SolarTextiles: Manufacturing textiles with energy from the sun. MIT Technology Review Innovators under 35 LATAM 2017. November 16th, Mexico City, Mexico.
25. Miguel A. Modestino. SolarTextiles: Harvesting the sun's energy to make textiles and clean the environment, all at once. Fashion Now and Then Conference, October 20th, 2017, LIM College, New York, NY, USA.
26. Miguel A. Modestino. Artificial Photosynthesis Engineering: Towards Solar-Chemical Reactors. MRS Stevens Chapter Guest Lecture. Department of Chemical Engineering, Stevens Institute of Technology, Hoboken, NJ. April 26th, 2017.

Invited presentations prior to joining NYU:

1. Miguel A. Modestino. Unconventional water splitting approaches towards scalable solar-hydrogen generators. Laboratory for Chemical Technology Seminar. Gent University, Gent, Belgium. September 30th, 2016.
2. Miguel A. Modestino. Unconventional water splitting approaches towards scalable solar-hydrogen generators. EPFL Valais Seminar. Sion, Switzerland. April 12th, 2016.

3. Miguel A. Modestino. Unconventional water splitting approaches towards scalable solar-hydrogen generators. Chemical and Biomolecular Engineering Seminar. New York University, Brooklyn, NY, USA. February 22nd, 2016.
4. Miguel A. Modestino. Self-Assembly and Transport in Artificial Photosynthesis Membranes. Symposium on the Future of Polymer Nanotechnology. University of Applied Sciences and Arts of Northwestern Switzerland and Paul Scherrer Institute, Windisch, Switzerland. December 18th, 2015.
5. Miguel A. Modestino. Unconventional water splitting approaches towards scalable solar-hydrogen generators. Energy and Environmental Science Readers' Choice Award Lecture. International Symposium on Energy Conversion and Storage. Beijing, China. June 1st, 2015.
6. Miguel A. Modestino. Artificial Photosynthesis Engineering. Process Intensification Seminar at ETH, Zurich, Switzerland. March 24th, 2015.
7. Miguel A. Modestino, Claudia A. Rodriguez, Demetri Psaltis, Christophe Moser. Design Principles of Deployable Solar-Hydrogen Generators. IEEE Photonics Conference, San Diego, CA. October 15th, 2014.
8. Miguel A. Modestino. Self-Assembly and Mass Transport in Artificial Photosynthesis Systems. Seminar at Chalmers University of Technology, Göteborg, Sweden. October 2nd, 2014.
9. Miguel A. Modestino. Systems engineering solutions for the development of cost effective solar-fuel generators. Seminar at University of Twente, Enschede, Netherlands. February 18th, 2014.
10. Miguel A. Modestino. Self-Assembly and Mass Transport in Artificial Photosynthesis Systems. Seminar at EMPA Dübendorf. August 2013.
11. Miguel A. Modestino, Augusta E. Modestino. Promoting Development from the Lab. TEDxUSB (March 2012), Universidad Simon Bolivar, Caracas, Venezuela. (http://www.youtube.com/watch?v=GDNCqosmVLA)
12. Miguel A. Modestino, Ahmet Kusoglu, Alexander Hexemer, Adam Z. Weber, and Rachel A. Segalman. Understanding Hierarchical Structure in Membranes and Assemblies for Artificial Photosynthesis. Synchrotron Radiation in Polymer Science, 2012. San Francisco, CA.
13. Miguel A. Modestino, Ahmet Kusoglu, Alexander Hexemer, Adam Z. Weber, and Rachel A. Segalman. Understanding Hierarchical Structure in Solar Fuel Membranes and Assemblies. ALS Users Meeting 2011. Lawrence Berkeley National Lab, Berkeley, CA.

Contributed presentations after joining NYU:

1. M.A. Modestino, **D.E. Blanco**. Enhancing Organic Electrosynthesis through Artificial Intelligence: The Case of Adiponitrile Electrohydrodimerization. 2019 AIChE Annual Meeting. Orlando, FL, USA.

2. M.A. Modestino, **A. Katzenberg**, M Fang, Y Okamoto, A Kusoglu. *Beyond Nafion: Structure-Property Relationships in Novel Perfluorinated Ionomers with Tunable Transport Properties.* ECS Fall Meeting 2019. Atlanta, GA, USA.

3. M.A. Modestino, **D.E. Blanco**. Process Intensification Approaches to Organic Electrosynthesis: Towards Sustainable Nylon Production. ECS Fall Meeting 2019. Atlanta, GA, USA.

4. **D.E. Blanco**, M.A. Modestino. *Enhancing Organic Electrosynthesis through Artificial Intelligence: The Case of Adiponitrile Electrohydrodimerization.* ECS Fall Meeting 2019. Atlanta, GA, USA.

5. **Adlai Katzenberg**, Minfeng Fang, Yoshiyuki Okamoto, Ahmet Kusoglu, and Miguel A. Modestino. *Beyond Nafion®: Exploring Structure-Property Relationships in Novel Perfluorinated Ionomers with Tunable Chemical Composition.* Gordon Research Conference: Nanomaterials for Applications in Energy Technology, Ventura, CA, February 26th-27th, 2019. (Poster)
6. **Adlai Katzenberg**, Minfeng Fang, Yoshiyuki Okamoto, Ahmet Kusoglu, and Miguel A. Modestino. *Beyond Nafion®: Exploring Structure-Property Relationships in Novel Perfluorinated Ionomers with Tunable Chemical Composition.* Gordon Research Seminar: Nanomaterials for Applications in Energy Technology, Ventura, CA, February 24th, 2019. (Oral)
7. **Daniela E. Blanco**, Aaliyah Dookhith, Miguel A. Modestino. *Controlling selectivity in the electrochemical reduction of acrylonitrile: Towards a solar-driven Nylon 6,6 production process*. ECS and SMEQ Biannual Meeting, Cancun, Mexico. September 30th, 2018.
8. **Adlai Katzenberg**, Miguel Modestino. *Electrolyte-Swollen PAA/PVA Hydrogel Thin Films for Improved Transport at Catalyst-Electrolyte Interfaces.* 17th International Conference on Organized Molecular Films, Brooklyn, NY, USA. July 26th,

Names of students from my group at NYU bolded.

Contributed presentations prior to joining NYU:

1. Miguel A. Modestino, E. Chinello, L. Coulot, M. Ackermann, F. Gerlich, C. Moser, D. Psaltis. High-Efficiency Photo-Electrochemical Chloro-Alkali Production. AIChE 2017 Meeting, October 29th, 2017, Minneapolis, MN, USA.
2. Miguel A. Modestino, S. Mohammad H. Hashemi, M. Neuenschwander, D. Gregory, C. Moser, Demetri Psaltis. *Developing Microfluidic Air-Based Solar-Hydrogen Generators*. Materials Research Society, Spring Meeting 2017, Phoenix, AZ, USA.
3. Enrico Chinello, Miguel A Modestino, Jan-Willem Schüttauf, David Lambelet, Antonio Delfino, Didier Dominé, Antonin Faes, Matthieu Despeisse, Julien Bailat, Demetri Psaltis, David Fernandez Rivas, Christophe Ballif, Christophe Moser. *SPIE Optics+ Photonics for Sustainable Energy.* November 2nd, 2016, San Diego, CA, USA.

4. Miguel A Modestino, Jan-Willem Schuettauf, Enrico Chinello, Claudia A Rodriguez, David Lambelet, Antonio Delfino, Didier Dominé, Antonin Faes, Matthieu Despeisse, Julien Bailat, Christophe Ballif, Demetri Psaltis, Christophe Moser. *Towards the Development of Practical Solar-Fuels Devices: Silicon-Based Solar-Hydrogen Generators with 14.2% Solar-to-Hydrogen Efficiency.* 230th Electrochemical Society Meeting, September, 2016. Honolulu, HI, USA.
5. Miguel A. Modestino, S. Mohammad H. Hashemi, Demetri Psaltis. *Splitting Water from Vapor Feeds: Towards Air-Based Solar-Hydrogen Generators*. 229th Electrochemical Society Meeting, Jun 2nd, 2016. San Diego, CA, USA.
6. S. Mohammad H. Hashemi, Miguel A. Modestino, Demetri Psaltis. *Towards High Efficiency Membrane-less Electrolysis*. MRS Spring Meeting. March 30th, 2016. Phoenix, AZ, USA.
7. Christophe Moser, Paul Delrot, Damien Loterie, Edgar Morales Delgado, Miguel Modestino, Demetri Psaltis. *Complex light in 3D printing.* SPIE Photonics West Conference. February 18th, 2016. San Francisco, CA, USA.
8. Paul Delrot, Miguel A. Modestino, Demetri Psaltis, Christophe Moser. *Laser-assisted inkjet printing of highly viscous fluids with sub-nozzle resolution*. SPIE Photonics West Conference. February 15th, 2016. San Francisco, CA, USA.
9. Miguel A. Modestino, Mohammad Hashemi, Christophe Moser, Demetri Psaltis. *Next-generation microstructured water-splitting devices*. AIChE 2015 Meeting, November 10th, 2015, Salt Lake City, UT, USA.
10. Miguel A. Modestino, S. Mohammad H. Hashemi, Demetri Psaltis. *Unconventional water splitting platforms*. 228th Electrochemical Society Meeting, October 14th, 2015, Phoenix, AZ, USA.
11. Miguel A. Modestino, Claudia A. Rodriguez, Demetri Psaltis, Christophe Moser. *Design and cost considerations of Solar-Fuel Devices*. 227th Electrochemical Society Meeting, May 28th, 2015, Chicago, IL, USA.
12. Miguel A. Modestino, Claudia A. Rodriguez, Demetri Psaltis, Christophe Moser. *Design Considerations of Cost Effective Solar-Hydrogen Generators*. Materials Research Society, Spring Meeting 2015, San Francisco, CA, USA.
13. Miguel A. Modestino, Claudia A. Rodriguez, Demetri Psaltis, Christophe Moser. *Design Considerations of Deployable Solar-Hydrogen Generators*. AIChE 2014 Meeting, November 18th, 2014, Atlanta, GA, USA.
14. Miguel A. Modestino, C. Moser, D. Psaltis, S. Haussener, A. Braun, J. Bailat. *Engineering Approaches Towards Cost Effective Solar-Hydrogen Generators*, Materials Research Society, Spring Meeting 2014, San Francisco, CA, USA.
15. Christopher Evans, Gabriel Sanoja, Yanika Schneider, Miguel Modestino, Rachel Segalman. *Ionic Conductivity and Gas Permeability of Polymerized Ionic Liquid Block Copolymer Membranes*. American Physical Society, March Meeting 2014. Denver, CO, USA.
16. Miguel A. Modestino, and Rachel A. Segalman. *Understanding Hierarchical Structure in Solar Fuel Membranes and Assemblies.* Materials Research Sociaty, Spring Meeting 2013, San Francisco, CA, USA.

17. Miguel A. Modestino, and Rachel A. Segalman. *Understanding Hierarchical Structure in Solar Fuel Membranes and Assemblies.* American Physical Society, March Meeting 2013. Baltimore, MD, USA
18. Miguel A. Modestino, Rachel A. Segalman. *Polymer mediated solution self-assembly of nanorods*. American Physical Society, March Meeting 2012. Boston, MA, USA.
19. Miguel A. Modestino, Jeff J. Urban, Rachel A. Segalman. *Controlling Nanorod Self-Assembly in Polymer Thin-Films.* American Physical Society, March Meeting 2011. Dallas, TX, USA.
20. Miguel A. Modestino, Jeff J. Urban, Rachel A. Segalman. *Vertical Alignment of Nanorods in Thin Film Polymer Nanocomposites.* American Physical Society, March Meeting 2010. Portland, OR, USA.
21. Miguel A. Modestino, Nicole Zacharia, Paula T. Hammond. *Dendrimer Encapsulated Metallic Nanoparticules Inmovilized in Polyelectrolyte Thin-Films*. VIII Venezuelan Chemistry Congress (2007). Caracas, Venezuela.
22. Nicole S. Zacharia, Miguel A. Modestino, Paula T. Hammond. *Nanoparticles in PAMAM dendrimer containing polyelectrolyte multilayers*. 232nd ACS National Meeting (2006), San Francisco, CA, USA.

PATENT APPLICATIONS

1. Miguel A. Modestino, Aaliyah Dookhit, Daniela E. Blanco. *Electrohydrogenation of Nitriles*. Patent pending, NYU, 2020 (US 63/023,173)
2. Miguel A. Modestino, Daniela E. Blanco. *Electrohydrodimerization of Aliphatic Olefins with Electrochemical Potential Pulses*. Patent pending, NYU, 2019 (US 62/827,021)
3. Miguel A. Modestino, Daniel Frey, Daniela Blanco, Yury Dvorkin. *Methods and electrochemical cells for redox mediated hydrogen production.* Patent pending, NYU, 2019 (US 62/809,429)
4. S. Ardo, E. Schwartz, J. Liu, J. Cardon, W. White, K. Tkacz, L. Renna, M. Modestino, D. Blanco. *Devices for integrated solar photodialysis of salt water*. UC Irvine/NYU, 2018 (UC Case 2018-525-0)
5. Miguel A. Modestino, Sophia Haussener. *Solar production of Nylon polymers and precursors for Nylon production*. Patent pending, EPFL, 2018 (PCT/IB2018/051852)
6. S. Mohammad H. Hashemi, Miguel A. Modestino, Jae-Woo Choi, Demetri Psaltis. *Membraneless electrolyzer*. Patent pending, EPFL, 2015 (WO 2016/063206 A1)
7. Miguel A. Modestino, S. Mohammad H. Hashemi, Christophe Moser, Demetri Psaltis. *Vapor-Fed Microelectrolysis Cells*. Patent pending, EPFL, 2014 (US 15/082,357)

AWARDS AND HONORS

1. MIT Technology Review Innovators Under 35 Award, Global List (2020)
2. NYU Goddard Junior Faculty Fellowship Award (2020)
3. National Science Foundation, CAREER Award (2019)

4. Doctoral New Investigator Award, ACS Petroleum Research Fund (2018)
5. MIT Technology Review Innovators Under 35 Award, Latin America (2017).
6. Global Change Award (2016). Awarded by the H&M Foundation for game changing ideas that can make the fashion industry circular.
7. Energy and Environmental Science Readers' Choice Lectureship award (2015). This prize is awarded annually to an outstanding young scientist (within 10 years of receiving their PhD) who has published in the journal.
8. Arkema Graduate Fellowship to outstanding graduate students with high promise in the polymer field (2010)
9. Power Top-Off Award to the most competitive prospective student from the Dept. of Chemical Engineering, UC Berkeley (2008)
10. Jose Felix Ribas Order - Highest academic honor from the Venezuelan Government for young people (2002)
11. Silver Medal on the 35th International Chemistry Olympiad (Greece, 2003)
12. Bronze Medal on the 34th International Chemistry Olympiad (Netherlands, 2002)
13. Silver Medal on the VII Iberoamerican Chemistry Olympiad (Argentina, 2002)

MEDIA COVERAGE

- MIT Technology Review Innovators Under 35. MIT Technology Review, USA (06/2020)
- Chemical and Biomolecular Engineering student Daniel Frey heads to NREL. NYU Tandon Press Release. Brooklyn, USA. (05/18/2020)
- Avoiding Bubble Troubles. University of Twente Press Release. Twente, The Netherlands (04/02/2020)
- Researchers turbocharge hydrogen fuel cells with novel ion-conducting copolymer NYU Tandon Press Release. Brooklyn, USA. (01/29/2020)
- Year in Chemistry 2019: Chemists made industrial synthesis greener. Chemical & Engineering News (12/2019)
- Pulsed Electrosynthesis plus Machine Learning Equals Bigger Yields for Adiponitrile. Chemical & Engineering News (09/06/2019)
- Lego's Quest to Make Plant-Based Toy Bricks Is Met With Skepticism. The Wall Street Journal. New York, USA (06/21/2019)
- NYU Tandon chemical engineering students excel on the national, international stage. NYU Tandon Press Release. Brooklyn, USA. (04/15/2019)
- Sustainable, solar-driven chemical manufacturing. Science Daily. (02/21/2019)
- NYU Tandon Team Charts Path to Sustainable, Solar-Driven Chemical Manufacturing. NYU Tandon Press Release. Brooklyn, USA. (02/20/2019)
- NYU Tandon Ph.D. Prepares to Rock the Entrepreneurial Competition. NYU Tandon News. Brooklyn, USA. (01/24/2019).
- InnoVention Inspiration. NYU Tandon News. Brooklyn, USA. (11/14/2019).
- Another Day, Another Triumph for Sunthetics Team. NYU Tandon News. Brooklyn, USA. (10/17/2018).
- Entrepreneurial Success in Tandon's Latine Community. NYU Tandon News. Brooklyn, USA. (10/01/2018).

- The Finish Line is Just the Beginning at the NYU Summer Faculty Startup Sprint. NYU Tandon News. Brooklyn, USA. (09/25/2018)
- Come See 12 Top NYU Startups Pitch. NYU Entrepreneurial Institute Entrepreneurs Blog. New York, NY, USA. (09/17/2018)
- Tandon-bred company sustains success and the environment. NYU Tandon News. Brooklyn, USA. (07/18/2018)
- Tandon for the Win. NYU Tandon News. Brooklyn, USA. (05/10/2018).
- NYU Tandon Student Wins U.S. DOE Grant to Conduct Research at Lawrence Berkeley National Lab. NYU Tandon News. Brooklyn, USA. (05/07/2018).
- Five Tandon Teams Move on to Compete in InnoVention Semifinals. NYU Tandon News. Brooklyn, USA. (03/05/2018).
- NYU Tandon Celebrates Achievements of Our Students and Faculty. NYU Tandon New. Brooklyn, USA. (12/21/2017)
- Engineering Sustainable Synthetic Fabric. PBS New York Learning Media. Brooklyn, USA. (12/18/2017).
- NYU Tandon Sustainable Energy Researcher Named a Top Young Latin American Innovator by MIT Technology Review. NYU Tandon Press Release. Brooklyn, USA. (10/05/2017)
- Honoring Latinx Heritage Month at Tandon. NYU Tandon News. Brooklyn, USA. (09/18/2017).
- A Robust Pipeline to STEM. NYU Tandon News. Brooklyn, USA. (09/01/2017).
- Genios en el mundo. Diario 2001. Caracas, Venezuela. (07/28/2017)
- Sustainability in Action at NYU Tandon. NYU Tandon News. Brooklyn, USA. (04/20/2017).
- Tandon Professor Earns Award for Eco-Friendly Textile Manufacturing. Washington Square News. New York, NY, USA. (04/11/2017).
- Making clothes out of water and sun. EPFL News. Lausanne, Switzerland. (04/07/2017)
- NYU Tandon professor wins H&M Global Change Award. Brooklyn Daily Eagle. Brooklyn, USA. (04/07/2017).
- NYU Tandon Professor Wins H&M Global Change Award For Research Into Sustainable Clothing Manufacturing. NYU Tandon Press Release. Brooklyn, USA. (04/07/2017).
- If H&M Has Its Way, in the Future We'll All Be Wearing "Grape Leather" and "Manure Couture". Vogue. New York, NY, USA. (04/06/2017).
- From Grapes To Cow Manure, H&M Foundation Unveils Winners Of Latest Innovation Award. Forbes. (04/05/2017).
- Tandon's Newest Faculty Members Bring Expertise in Clean Energy, Nanomaterials, Machine Learning, and More. NYU Tandon News. Brooklyn, USA. (09/20/2016).

EDUCATION INNOVATION

- **Developed graduate level numerical methods class for chemical engineering (CBE GY 6153):** The class introduces students to numerical methods concepts in the context of chemical engineering. Theoretical concepts are first introduced in class, followed by in-class examples of implementations of numerical methods in Matlab. Students are then

exposed to original chemical engineering problems in homework problems where they need to write independent Matlab codes to gain physical insights into complex engineering systems.

- **Introduced graduate students to finite-element simulation software (CBE GY 6153):** Through a series of two lectures, students are introduced into finite-element simulations and exposed to the use COMSOL Multiphysics® for solving complex engineering problems involving multiple coupled physical phenomena.

- **Developed a computational design project for chemical engineering graduate students (CBE GY 6153):** students are presented with an open-ended project where they have to use computational tools to optimize the design of a flow-based electrochemical reactor. The project covers topics of my group's research, which exposes students to real research application of computational methods. Students are asked to work in groups and write a comprehensive report on their recommendation for a device design.

- **Introduced concepts of computational methods in undergraduate Heat and Mass Transport class (CBE UY 3313):** through a series of lectures, undergraduate chemical engineering students were introduced to the finite-differences numerical method for solving partial differential equations encountered in transport phenomena.

ACADEMIC ACTIVITIES

Teaching Activities:

Numerical Methods in Chemical Engineering (CBE GY 6153):
- Spring 2017, 14 Students, Course rating: 4.3/5.0, Instructor rating: 4.5/5.0
- Fall 2017, 25 Students, Course rating: 4.3/5.0, Instructor rating: 4.2/5.0
- Fall 2018, 22 Students, Course rating: 4.5/5.0, Instructor rating: 4.7/5.0

Transport I: Heat and Mass Transport (CBE UY 3313):
- Fall 2018, 50 Students, Course rating: 4.3/5.0, Instructor rating: 4.5/5.0

Research Advising:

Current Post-Doctoral Researchers:
- Debdyuti Mukherjee, Chemistry Ph.D., Indian Institute of Science, Bangalore, India (May 2019 – current)

Current Ph.D. Students:
- Toshihiro Akashige, Chemical Engineering Ph.D. student, NYU. (Jan 2019 – current)
- Andrea Angulo, Chemical Engineering Ph.D. student, NYU. (Jan 2019 – current)
- Daniel Frey, Chemical Engineering Ph.D. student, NYU. (Jan 2018 – current)
- Adlai Katzenberg, Chemical Engineering Ph.D. student, NYU. (Jan 2017 – current)

Current M.S. Students:

- Lankun Yang, Chemical Engineering M.S. student, NYU. (Jan 2020 – current)

Current B.S. Students:

- Brian Chen, Applied Physics B.S. student, NYU (Sep 2017 – current)
- Sunny Chantanakajonfung, Chemical Engineering B.S. student, NYU. (Jan 2020 – current)
- Ju Hee Shin, Chemistry and Chemical Engineering B.S. student, NYU. (Sep 2019 – current)

Past Post-Doctoral Researchers:

- Yasmine Hajar, Chemical and Biological Engineering Ph.D., University of Ottawa, Canada (Sep 2019 – May 2020)
- Thomas Yu, Materials Science Ph.D., Northwestern University, (May 2018 – May 2019)

Past Doctoral Students:

- Daniela E. Blanco, Chemical Engineering Ph.D. student, NYU. (Jan 2017 – May 2020)

Past B.S. and M.S. Students:

- Xinshu Shang, Chemical Engineering, M.S. student, NYU (Jan 2019 – May 2020)
- Kaylee Dunnigan, Chemical Engineering, B.S. student, NYU (Sep 2018 – May 2020)
- Andrea Quispe, Chemical Engineering, B.S. student (Jun 2019 – May 2020)
- Rhea Reyes, Chemical Engineering/Chemistry, B.S. student, NYU (Sep 2018 – May 2020)
- Bryan Lee, Chemical Engineering, B.S. student, NYU (Sep 2018 – May 2020)
- Neha Vasudevan, Chemical Engineering, B.S. student (Summer 2019)
- Azan Brar, Chemical Engineering, B.S. student (Summer 2019)
- Tana Siboonruang, Chemical Engineering B.S. student, NYU (Sep 2017 – Jun 2019)
- Aaliyah Dookhith, Chemical Engineering B.S. student, NYU (Sep 2017 – Jun 2019)
- Nicole Schnabel, Chemical Engineering, M.S. student, NYU (Jan 2018 – May 2019)
- Kunal Miyani, Chemical Engineering, B.Eng. Visiting Student, Loughborough University (Jan 2019 – Jun 2019)
- Sairam Ravishankar, Chemical Engineering B.S. Visiting Student, SASTRA University, India (Feb 2019 – Jul 2019)
- Purnima Prasad, Chemical Engineering, B.S. student (Aug 2018 – Jan 2019)
- Akash Raman, Chemical Engineering B.S. intern, SASTRA University, India (Feb 2018 – Jun 2018)
- Cesar Muñoz, Chemical Engineering M.S. student, NYU (Jan 2017 – Jun 2018)
- Zhixiao Zhao, Chemical Engineering M.S. student, NYU (Sep 2017 – Sept 2018)
- Peter van der Linde, Visiting Ph.D. student, Twente University, The Netherlands (Jan 2018 – April 2018)
- Alexandra Ryan, Chemical Engineering B.S. student, NYU (Sep 2017 – May 2018)
- Myriam Sbeiti, Chemical Engineering B.S. student, NYU (Jan 2017 – May 2018)
- Ricardo Mathison, Chemical Engineering B.S. student, University of Wisconsin (Jun – Aug 2017)
- Janar Jeksen, Mechanical Engineering B.S. student, NYU Abu Dhabi, (Jun – Aug 2017)

Thesis committee participation:

- Enrico Chinello, Ph.D. in Photonics, Ecole Polytechnique Federale de Lausanne, Switzerland (Thesis Defense, April 2019)
- Houlei Gan, Ph.D. in Engineering, Deaking University, Australia (Thesis Defense, Feb 2018)
- Benjamin Riskin, Ph.D. student in Chemical Engineering, NYU (Expected defense, Spring 2021)
- Yukun Liu, Ph.D. student in Chemical Engineering, NYU (Expected defense, Spring 2021)
- Mersal Khwaja, M.S. student in Chemical Engineering, NYU (Expected defense, May 2019)

SERVICE ACTIVITIES

Internal Service Activities:

- Member of the Racial Justice, Inclusion and Diversity Committee, Chemical and Biomolecular Engineering Department, NYU Tandon (2020-current)
- Member of the Inclusion@Tandon Committee, NYU Tandon (2019-current)
- Member of the Chemical and Biomolecular Engineering Graduate Studies Committee, NYU Tandon (2017-current)
- Faculty Speaker, Back to School Day & Golden Jubilee Induction Ceremony, NYU Tandon (Spring 2019)

External Service Activities:

- Organizer, ERC Planning Workshop: Center for the Electrification of the Chemical Industry. June 2020. (Virtual)
- Discussion Leader, 2020 NSF Workshop on Electroorganic Chemistry: from Synthesis to Chemical Manufacturing. Washington, DC, USA.
- Co-chair for *CO_2 electroreduction Symposium*, AIChE Meeting 2019, Orlando, FL, USA.
- Co-chair for *Green Chemical Reaction Engineering for Sustainability Symposium*, AIChE Meeting 2019, Orlando, FL, USA.
- Co-chair for *Green Chemical Reaction Engineering for Sustainability Symposium*, AIChE Meeting 2018, Pittsburg, PA, USA.
- Session chair of symposium on *(Photo)Electrocatalytic Materials and Integrated Assemblies for Solar Fuels Production*. MRS Spring Meeting 2017, Phoenix, AZ, USA.
- Co-organizer of international conference on *Pathways towards Solar-Hydrogen Deployment*, June 2016, Lorentz Center, The Netherlands.
- Guest editor for *Solar-Fuels Special Issue*, Journal of Physics D: Applied Physics. To be published in 2016.
- Co-chair of Special Symposium on *Optoelectronic Devices for Solar Energy Harvesting* at the 2014 IEEE Photonics Conference, San Diego, October 2014.

- Proposal Reviewer for National Science Foundation (CBET), Department of Energy (DOE EERE), Netherlands Organisation for Scientific Research (NWO), and Swiss National Science Foundation.
- Reviewer for ECS (J. Eletrochem. Soc.), ACS (J. Phys. Chem, ACS Macro Letters and Macromolecules), RSC (Energy and Environmental Science), Wiley journals (Angewandte Chemie, Advanced Materials and Advanced Energy Materials).