CURRICULUM VITAE – August 2016

Teddy (Tewodros) Asefa
Professor, Department of Chemistry and Chemical Biology
Professor, Department of Chemical and Biochemical Engineering
Member, Institute for Advanced Materials, Devices and Nanotechnology (IAMDN)
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Research Interests:

Nanoscience and nanotechnology; inorganic materials chemistry; nanocatalysts and nanocatalysis; nanomedicine and targeted treatment of cancer; shaped nanoparticles and their self-assembly; nanoporous materials; nanoelectronics; nanomaterials for solar cells and renewable energy; inorganic-organic nanocomposites; and nanobiomaterials. Enjoys challenging and collaborative research.

Education:

Post-Doctoral Fellow	Chemistry, McGill University, Canada; 12/2002 – 5/2005 *Advisor:* Prof. R. Bruce Lennox *Project:* Metal and semiconductor nanoparticles synthesis through electroless and chemical vapor deposition in porous matrices and on nanopatterned substrates
Post-Doctoral Fellow	Chemistry, University of Toronto, Canada; 8/2002 – 12/2002 *Advisor:* Prof. Geoffrey A. Ozin *Project:* Functionalization of nanoporous materials *via* high temperature vapor phase reactions
Ph.D.	Chemistry, University of Toronto, Canada; 9/1998 – 8/2002 *Advisor:* Prof. Geoffrey A. Ozin *Dissertation:* Periodic Mesoporous Organosilicas - A New Class of Hybrid Organic-Inorganic Nanocomposites
M.A.	Chemistry, State University of New York at Buffalo & Institute for Lasers, Photonics & Biophotonics, Buffalo, USA; 9/1996 – 9/1998 *Advisor:* Prof. Paras N. Prasad *Dissertation:* Nanostructured Materials for Photonics
B.Sc	Chemistry, Distinction, Addis Ababa University, Ethiopia; 10/1988-8/1992 *Advisor:* Prof. Dirshaye Menberu *Research Report:* Organic natural products - Isolation and Characterization of Anthochlor Flavonoids from the Flowers of *Bidens Prestinaria* and *Bidens Macroptera*

Employment and Research Experience:

07/2015 – Date	- Professor, Department of Chemistry and Chemical Biology, Rutgers, The State University of New Jersey at New Brunswick
07/2015 – Date	- Professor, Department of Chemical and Biochemical Engineering, Rutgers, The State University of New Jersey at New Brunswick
10/2014 – 12/2014	- Visiting Professor, Department of Chemistry, Kyoto University, Kyoto, Japan
10/2014 – 12/2017	- Visiting Professor, Department of Chemistry, Maringá State University, Maringá, Paraná, Brazil, 2014-2017
09/2009 – 06/2015	- Associate Professor of Chemistry and Chemical Biology, Rutgers, The State University of New Jersey at New Brunswick
09/2009 – 06/2015	- Associate Professor of Chemical and Biochemical Engineering, Rutgers, The State University of New Jersey at New Brunswick
06/2015	- International Advisory Board Member, International Workshop on Graphene and C_3N_4-based Photocatalysts, Wuhan University of Technology, Wuhan, China
06/2014	- International Advisory Board Member, International Nanoporous Symposium, Canada.
09/2009 – Date	- Member, The Rutgers Institute for Materials, Devices, and Nanotechnology (IAMDN)
09/2009 – Date	- Member, The Rutgers Energy Institute (REI)
09/2009 – Date	- Member, The Rutgers Institute for Materials, Devices, and Nanotechnology (IAMDN)
12/2009 – Date	- Interim Director, The Rutgers Catalysis Research Center (RCRC)
03/2011 – 2012	- Vice-President, Sigma Xi Rutgers Chapter for Faculty and Professional Engineers
06/2005 – 08/2009	- Assistant Professor of Chemistry, Syracuse University
07/2007 – 08/2009	- Assistant Professor of Biochemistry, Syracuse University
01/2007 – 08/2009	- Member of the Syracuse Biomaterials Institute (SBI)
10/2003 – 11/2004	- Guest Lecturer in Nanoscience and Nanotechnology course, McGill University, Montreal, Canada (two years)
09/2003 – 10/2003	- Guest Lecturer in Supramolecular Self-assembly course, Concordia University, Canada
11/2004 – 11/2004	- Judged Graduate Presentations, Chemistry and Biochemistry Graduate Research Conference, Concordia University, Canada
09/1998 – 08/2002	- Teaching Assistant, University of Toronto, Canada; General Chemistry and Introductory Physical Chemistry - Research Assistant, University of Toronto, Canada Organosilanes synthesis, nanoporous organic-inorganic hybrid materials, supramolecular self-assembly, catalysis, etc.
08/1996 – 09/1998	- Research Assistant, State University of New York at Buffalo and Institute for Lasers, Photonics and Biophotonics, Buffalo, USA;
09/1992 – 08/1996	- Assistant Lecturer and Graduate Teaching Assistant, Basic Sciences Department, Debub University, Awassa, Ethiopia
09/1991 – 06/1992	- Chemistry Tutor, Addis Ababa University, Ethiopia; - Undergraduate Research Assistant: Natural products

Professional Societies and Service:

2009 – Present	Interim Director, The Rutgers Catalysis Research Center (RCRC)
2007 – Present	Advisory Board Member, International Symposiums on Nanoporous Materials.
2009 – Present	Member, Catalysis Society of Metropolitan New York (CSMNY)
2006 – 2009	Advisory Board Member, Journal *ChemTracts – Inorg. Chem.*
October 2010	Invited Annual Oversight Reviewer of the NIST/NSF Center for High Resolution Neutron Scattering (CHRNS) facility at NIST Campus, Gaithersburg, MD.
September 2010	Invited Participant, NSF Ceramic Materials Principal Investigator Workshop, National Science Foundation, Washington, DC.
August 2010	Invited Panelist, Fulbright Fellowship Selection Committee, Institute for International Education (IIE), New York City, NY.
August 2010	Invited Panelist, SBIR Program, Nanotechnology, Environmental Protection Agency (EPA), Washington, DC.
July 2010	Panelist, STAR Program, Environmental Protection Agency (EPA), Washington, DC.
May 2010	Reviewer of Tenure Packet for National Central University of Taiwan, Taipei, Taiwan.
April 2010	Invited Panelist, SBIR Program, National Science Foundation, Washington, DC.
October 2009	Invited Panelist, SBIR Program, Nanotechnology, Environmental Protection Agency (EPA), Washington, DC.
November 2008	Invited Panelist, Small Business Innovation Research (SBIR), Nanotechnology, Environmental Protection Agency (EPA), Washington, DC.
March 2008	Panelist Member, Materials World Network, Division of Materials Research, National Science Foundation (NSF), Washington, DC.
April 2008	Panelist, Joint NSF–DFG, Materials World Network (MWN), Bonn, Germany (One of the three participants from the US).
November 2008	Panelist, CAREER Proposals, Solid State and Materials Chemistry, National Science Foundation, Washington, DC.
August 2007	Panelist, Nanotechnology, Environmental Protection Agency (EPA), Washington, DC.
August 2006	Panelist, Small Business Innovation Research (SBIR), Nanotechnology, Environmental Protection Agency (EPA), Washington, DC.
1999–Present	Member, American Chemical Society (ACS).
2000–2002	Member, Materials Research Society (MRS).
2010–Present	Member, American Ceramics Society (ACerS).
2000–2002	Organizer, University of Toronto, Chemistry Soccer Team.
2003–2005	Member, McGill University, Chemistry Soccer Team.
2001–Present	Member, Association for Higher Education and Development (FANA, AHEAD, Ethiopian Canadian Scientists for helping higher education in Ethiopia).

Awards and Fellowships:

- Promotion to Full Professor, Department of Chemistry and Chemical Biology (School of Arts and Sciences) and Department of Chemical and Biochemical Engineering (School) of Engineering), Rutgers University at New Brunswick, July 2015.
- Swiss National Science Foundation Fellowship for Visiting Professorship at ETH Zürich, Zürich, Switzerland, 2015.
- CNPq Science Without Borders Fellowships for Visiting Professorship, Brazil, 2014-2017.
- NSF grant from the National Science Foundation, 2015-2018.
- Visiting Professorship, Department of Chemistry, Kyoto University, Fall 2014.
- Rutgers Board of Trustees Research Fellowships for Scholarly Excellence, 2012.
- NSF Special Creativity Award with from the National Science Foundation, 2011-2013.
- NSF Grant from the National Science Foundation Environmental Health and Safety of Nanotechnology (NanoEHS) Program in the Chemical, Environmental, Bioengineering, and Transport Systems (CBET) Division, 2011 – 2014.
- NSF-DMR, American Competitiveness and Innovation (ACI) Fellow, One of the 10 Awardees for 2010.
- NSF CAREER Award, 2007–2012.
- NSF Grant, Division of Materials Research (DMR), 2008–2011.
- Two Awards, Collaborative Activities for Research and Technology Innovation (CARTI) Grants, Syracuse Center of Excellence in Environmental and Energy Systems (Syracuse CoE), 2007–2009.
- Grant, Empire State Development Corporation, 2007–2009.
- Instrumentation Grant, National Science Foundation, 2007–2008.
- Fulbright Scholar, 1996 – 1998, University of Delaware, USA and State University of New York at Buffalo, USA.
- Dean's List, B.Sc., 1992, Addis Ababa University, Ethiopia.
- Distinction Graduate and First Rank, 1992, Chemistry Department, Addis Ababa University, Ethiopia.
- Teaching / Research Assistantships, 1996 – 1998, Chemistry Department, State University of New York at Buffalo, USA.
- Teaching / Research Assistantships, 1998-2002, Chemistry Department, University of Toronto, Canada.
- University of Toronto Open Fellowships, 1999 – 2002, Chemistry Department, University of Toronto, Toronto, Canada.

Book, Publications, Book Chapters, and Patents:

Total Citations: > 7200+; h-Index = 40

Book

1. "Nanocatalysis: Synthesis and Applications" ~736 pages, Edited by Vivek Polshettiwar and Tewodros Asefa, John Wiley & Sons, Inc., **2013**. ISBN: 978-1-118-14886-0. Released July 2013:

http://www.wiley.com/WileyCDA/WileyTitle/productCd-111814886X.html

Book Chapters

(8) Asefa, T.*; Dubovoy, V. "Ordered Mesoporous/Nanoporous Inorganic Materials via Self-Assembly" Invited Book Chapter in Comprehensive Supramolecular Chemistry II, Elsevier Reference Module in Chemistry, Molecular Sciences and Chemical Engineering (Eds. Jerry Atwood, Colin Raston and Claire Byrne), Elsevier, **2016**, *Submitted*.

(7) Asefa, T.; Huang, X. "Nanocatalysis: Catalysis by Nanomaterials" Invited Book Chapter in Handbook of Solid State Chemistry, (Ed. Andreas Stein), John Wiley and Sons, **2016**, *Accepted for Publication; In Press*.

(6) Polshettiwar, V.*; Asefa, T.*; "Introduction to Nanocatalysis" Book Chapter In Nanocatalysis: Synthesis and Applications" (V. Polshettiwar, T. Asefa, eds.), John Wiley & Sons, Inc., **2013**, 1-10.

(5) Asefa, T.*; Biradar, A. V.; Das, S.; Sharma, K. K.; Silva, R. "Nanocatalysts for the Heck Coupling Reactions" 40 pages, Book Chapter in "Nanocatalysis: Synthesis and Applications" (V. Polshettiwar, T. Asefa, eds.), John Wiley & Sons, Inc., **2013**, 11-50.

(4) Asefa, T.*; Biradar, A. V.; Das, S.; Sharma, K. K. "Nanostructured Catalysts for the Henry, Aldol, and Knoevenagel Reactions" 30 pages, Book Chapter in "Nanocatalysis: Synthesis and Applications" (V. Polshettiwar, T. Asefa, eds.), John Wiley & Sons, Inc., **2013**, 221-250.

(3) Asefa, T.*; Anan, A.; Duncan, C. T.; Xie, Y. "Spherical & Anisotropic Non-Magnetic Core-shell Nanomaterials - Synthesis and Characterization" *Invited Book Chapter* in a Book "Non Magnetic Bi-Metallic and Metal Oxide Nanomaterials for Life Sciences", Editor: Challa S. S. R. Kumar, Wiley-VCH, Volume 3, Chapter 9, **2009**, pp. 281-330.

(2) Asefa, T.*; Anan, A.; Duncan, C. T.; Xie, Y. "Functionalized Nanoporous and

Mesoporous Heterogeneous Catalysts – New Synthetic Strategies and Applications" *Invited Book Chapter* in a Book "Heterogeneous Catalysis Research Progress", Editor: Mathias B. Gunther, Nova Publishers, New York, Chapter 2, **2009**, pp. 81-110.

(1) Asefa, T.*; Sharma, K. K.; Anan, A.; Vathyam, R.; Buckley, R. P.; Dam, H. M.; Xie, Y.; Quinlivan, S.; Wang, G.; Duncan, C. "Efficient and Selective Nanoporous Catalysts by Placing Multiple Site-Isolated Functional Groups on Mesoporous Materials" *Invited Book Chapter* In "Nanoporous Materials" (A. Sayari and M. Jaroniec, eds.), World Scientific Publ. Co., Singapore, **2008**, pp. 497-508.

Peer-Reviewed Publications

2016 (Published)

(136) Asefa, T.* "Metal-Free and Noble Metal-Free Heteroatom-Doped Nanostructured Carbons as Prospective Sustainable Electrocatalysts" *Acc. Chem. Res.* **2016**, *Article ASAP Published:* DOI: 10.1021/acs.accounts.6b00317.

(135) Koh, K.; Meng, Y.; Huang, X.; Zou, X.; Chhowalla, M.; Asefa, T.* "N- and O-Doped Mesoporous Carbons Derived from Rice Grains: Efficient Metal-Free Electrocatalysts for Hydrazine Oxidation" *Chem. Commun*. **2016**, *Accepted for Publication, In Press*.

(134) Asefa, T.*; Dubovoy, V. "Ordered Mesoporous/Nanoporous Inorganic Materials via Self-Assembly" Invited Book Chapter in Comprehensive Supramolecular Chemistry II, Elsevier Reference Module in Chemistry, Molecular Sciences and Chemical Engineering (Eds. Jerry Atwood, Colin Raston and Claire Byrne), Elsevier, **2016**, *Submitted*.

(133) Chen, H.; Yu, G.; Li, G.-D.; Xie, T.; Sun, Y.; Liu, J.; Li, H.; Huang, X.; Wang, D.; Asefa, T.*; Chen, W.*; Zou, X.* "Unique Electronic Structure in a Porous Ga-In Bimetallic Oxide Nano-Photocatalyst with Atomically Thin Pore Walls" *Angew. Chem. Int. Ed.* **2016**, *55,* 11442–11446.

(132) Landers, J.; Colon-Ortiz, J.; Zong, K.; Goswami, A.; Asefa, T.; Vishnyakov, A.; Neimark, A. V.* "In Situ Growth and Characterization of Metal Oxide Nanoparticles Within Polyelectrolyte Membranes" *Angew. Chem. Int. Ed*. **2016**, *55*, 11522–11527.

(131) Huang, X.; Zhou, L.-J.; Voiry, D.; Chhowalla, M.; Zou, X.*; Asefa, T.* "Monodisperse Mesoporous Carbon Nanoparticles from Polymer/Silica Self-Aggregates and Their Electrocatalytic Activities" *ACS Appl. Mater. Interfaces.* **2016**, *8*, 18891–18903.

(130) Wu, Y.; Li, G.-D.; Yang, L.; Liu, Y.; Lian, X.; Asefa, T.*; Zou, X.* "Overall Water Splitting Catalyzed Efficiently by an Ultrathin Nanosheet-Built, Hollow Ni_2S_3-Based Electrocatalyst" *Adv. Funct. Mater*., **2016**, *26*, 4839–4847.

(129) Asefa, T.; Huang, X. "Nanocatalysis: Catalysis by Nanomaterials" Invited Book Chapter in Handbook of Solid State Chemistry, (Ed. Andreas Stein), John Wiley and Sons, **2016**, *Accepted for Publication; In Press*.

(128) Voiry, D.; Fullon, R.; Yang, J.; Silva, C. C. C.; Kappera, R.; Bozkurt, I.; Kaplan, D.; Lagos, M.; Batson, P.; Gupta, G.; Mohite, A.; Dong, L.; Er, D.; Shenoy, V.; Asefa, T.; Chhowalla, M. "The Role of Electronic Coupling between Substrate and 2D MoS_2 Nanosheets on Electro-Catalytic Production of Hydrogen" *Nature Mater*., **2016**, *15*, 1003–1009.

(127) Fragal, V. H.; Cellet, T. S. P.; Pereira, G. M.; Fragal, E. H.; Costa, M. A.; Nakamura, C. V.; Asefa, T.; Rubira, A. F.; Silva, R.* "Ultrathin Layers of PVA and PAA and In Situ Formed Ag Nanoparticles as Versatile Antimicrobial Surfaces" *Int. J. Biol. Macromol*., **2016**, *91*, 329–337.

(126) Huang, X.; Zhang, T.; Zou, X.; Tao, Z.*; Asefa, T.* "Improving Dissolution of Fenofibrate with Yeast Cells-Derived Hollow Core/Shell Carbon Microparticles" *RSC Adv.*, **2016**, *6*, 30226–30233.

(125) Du, J.*; Huang, X.; Zhao, R.; Li, J.; Asefa, T.* "Hierarchically Self-Assembled Star-Shaped ZnO Microparticles: Novel Materials for Electrochemical Sensing of Amines" *Chem. Eur. J.*, **2016**, *22*, 8068–8073.

(124) Cazetta, A. L; Martins, A. C.; Pezoti, O.; Bedin, K. C.; Beltrame, K. K.; Asefa, T.; Almeida, V. C.* "Synthesis and Application of N–S-Doped Mesoporous Carbon obtained from Nanocasting Method using Bone Char as Heteroatom Precursor and Template" *Chem Eng. J.*, **2016**, *300*, 54–63.

(123) Du, J.*; Wu, J.; Zhao, R.; Yao, H.; Asefa, T.; Li, J. "Synthesis and Gas-Sensing Performance of Column-Shaped Zinc Oxide Doped with Graphene" *Mater. Today,* **2016**, *3*, 345–349.

(122) Cazetta, A.; Pezoti, O.; Bedin, K.; Silva, T.; Paesano Junior, A.; Asefa, T.*; Almeida, V.* "Magnetic Activated Carbon Derived from Biomass Waste by Concurrent Synthesis: Efficient Adsorbent for Toxic Dyes" *ACS Sustain. Chem. Eng.*, **2016**, *4,* 1058–1068.

(121) Gawande, M. B.; Goswami, A.; Felpin, F.-X.; Asefa, T.; Huang, X.; Silva, R.; Zou, X.; Zboril, R.*; Varma, R.* "Cu and Cu-Based Nanoparticles: Synthesis and Applications in Catalysis" *Chem. Rev*., **2016**, *116,* 3722–3811.

(120) Martins, A.; Huang, X.; Goswami, A.; Koh, K.; Meng, Y.; Almeida, V.; Asefa, T.* Reviewer "Fibrous Porous Carbon Electrocatalysts for Hydrazine Oxidation" *Carbon*, **2016**, *102*, 97–105.

(119) Biradar, A. A.; Biradar, A. V.; Sun, T.; Chan, Y.; Huang, X.; Asefa, T.* "Bicinchoninic Acid-Based Colorimetric Chemosensor for Detection of Low Concentrations of Cyanide" *Sensors Actuators B*, **2016**, *222,* 112–119.

(118) Datta, K. J.; Gawande, M. B.; Datta, K. K. R.; Ranc, V.; Pechousek, J.; Krizek, M.; Tucek, J.; Kale, R.; Pospisil, P.; Varma, R. S.; Asefa, T.; Zoppellaro, G.*; Zboril, R.* "Micro–mesoporous iron oxides with record efficiency for the decomposition of hydrogen peroxide: morphology driven catalysis for the degradation of organic contaminants" *J. Mater. Chem. A*, **2016**, *4,* 596–604.

(117) Fragal, V. H.; Cellet, T. S.; Fragal, E. H.; Pereira, G. M.; Garcia, F. P.; Nakamura, C. V.; Asefa, T.; Rubira, A. F.; Silva, R.* "Controlling Cell Growth with Tailorable 2D Nanohole Arrays" *J. Colloid Interface Sci.*, **2016**, *466,* 150–161.

(116) Araujo, R. A.; Rubira, A. F.; Asefa, T.; Silva, R.* "Metal Doped Carbon Nanoneedles and Effect of Carbon Organization with Activity for Hydrogen Evolution Reaction (HER)" *Carbohydr. Polym.*, **2016**, *137*, 719–725.

2015

(115) Feng, L.-L.; Yu, G.; Wu, Y.; Li, G.-D.; Li, H.; Sun, Y.; Asefa, T.*; Chen, W.*; Zou, X.* High-Index Faceted Ni_3S_2 Nanosheet Arrays as Highly Active and Ultrastable Electrocatalysts for Water Splitting" *J. Am. Chem. Soc*. **2015**, **2015**, *137,* 14023–14026.
Featured in JACS Spotlight: http://pubs.acs.org/doi/full/10.1021/jacs.5b11387

(114) Zhang, T.; Huang, X.; Asefa, T.* "Nanostructuring Polymers with High Surface Area using Inorganic Templates for Efficient Extraction of Anionic Dyes from Solutions" *Chem. Commun.*, **2015**, *51,* 16135–16138.

(113) Zou, X.; Sathe, B.; Silva, R.; Goswami, A.; "Bio-Inspired Synthesis of Efficient H_2-Evolving Electrocatalysts: Cu Ions-Doped g-Carbon Nitride" *Appl. Surf. Sci.* **2015**, *357*, 221–228.

(112) Liu, Y.; Yu, G.; Li, G.-D.; Sun, Y.; Asefa, T.*; Chen, W.*; Zou, X.* "Coupling Mo_2C with Nitrogen-Rich Nanocarbon Leads to Efficient Hydrogen-Evolution Electrocatalytic Sites" *Angew. Chem. Int. Ed.* **2015**, *54*, 10752–10757. (**Front Cover**).

(111) Gawande, M.; B.*; Guo, H.; Asefa, T.; Goswami, A.; Biradar, A. V.; Peng, D.-L.; Zboril, R.*; Varma, R. S.* "Core-Shell Nanoparticles: Applications in Catalysis and Electrocatalysis" *Chem Soc. Rev*. **2015**, *44*, 7540-7590.

(111) Silva, R.; R. Silva, G. M. Pereira, D. Voiry, M. Chhowalla, T. Asefa* "Co_3O_4 Nanoparticles/Cellulose Nanowhiskers-Derived Amorphous Carbon Nanoneedles:

Sustainable Materials for Supercapacitors and Oxygen Reduction Electrocatalysis" *RSC Adv*. **2015**, *5,* 49385–49391.

(110) Huang, X.; Zou, X.; Meng, Y.; Mikmeková, E.; Chen, H.; Voiry, D.; Goswami, A.; Chhowalla, M.; Asefa, T.* "Yeast Cells-Derived, Heteroatom-Doped, Hollow Core/Shell Nanocarbons as Electrocatalysts for Oxygen Reduction and Hydrazine Oxidation Reactions" *ACS Appl. Mater. Interfaces* **2015**, *7*, 1978–1986.

(109) Biradar, A. V.*; Patil, V. S.; Chandra, P.; Asefa, T.* "Trifunctional Mesoporous Silica-Based, Highly Active Catalyst for One-Pot, Three-Step Cascade Reactions" *Chem. Commun.* **2015**, *51*, 8496–8499.

(108) Huang, X.; Zhang, T.; Goswami, A.; Luo, F.; Asefa, T.* "Glutathione-Triggered Release of Model Drug Molecules from Mesoporous Silica Nanoparticles with Non-Redox Process" *RSC Adv.* **2015**, *5*, 28836–28839.

(107) Voiry, D.; Goswami, A.; Kappera, R.; Silva, C. C. C.; Kaplan, D.; Fujita, T.; Chen, M.; Asefa, T.; Chhowalla* "Covalent Functionalization of Monolayered Transition metal Dichalcogenides by Phase Engineering" *Nature Chem.*, **2015**, *7*, 45–49.

(106) Alves, D. C. B. *; Silva, R.; Voiry, D.; Asefa, T.; Chhowalla, M. "Copper nanoparticles stabilized by reduced graphene oxide for CO_2 reduction reaction" *Mater. Renew. Sustain. Energy* **2015**, *4:2*, 1-7.

(105) Martins, A. C.; Junior, O. P.; Cazetta, A. L.; Bedin, K. C.; Yamazaki, D. A. S.; Bandoch, G. F. G.; Asefa, T.; Visentainer, J. V.; Almeida, V. C.* "Removal of Tetracycline by NaOH-Activated Carbon Produced from Macadamia Nut Shells: Kinetic and Equilibrium Studies" *Chem. Eng. J.*, **2015**, *260*, 291–299.

2014

(104) Koh, K.; Seo, J.-E.; Lee, J. H.; Goswami, A.*; Yoon, C. W.*; Asefa, T.* "Ultrasmall Palladium Nanoparticles Supported on Amine-Functionalized SBA-15 as Efficient Catalysts for Formic acid Dehydrogenation" *J. Mater. Chem. A* **2014**, *2*, 20444–20449.

(103) Meng, Y.; Voiry, D.; Goswami, A.; Zou, X.; Huang, X.; Chhowalla, M.; Liu, Z.*; Asefa, T.* "Nitrogen and Sulfur Co-Doped Mesoporous Carbons as Metal-Free Catalyst for Oxygen Reduction and Alcohol Oxidation Reactions" *J. Am. Chem. Soc.* **2014**, *136*, 13554–13557.

(102) Huang, X.; Tao, Z.; Praskavich Jr., J. C.; Goswami, A.; Al-Sharab, J.-F.; Minko, T.; Polshettiwar, V.; Asefa, T.* "Silica Microspheres (KCC-1) with Fibrous Pore Structure Possess High DNA Adsorption Capacity and Effectively Deliver Genes" *Langmuir* **2014**, *30,* 10886–10898.

(101) Meng, Y.; Zou, X.; Huang, X.; Goswami, A.; Liu, Z.; Asefa, T.* "Polypyrrole-Derived Nitrogen-Doped Mesoporous Carbons as Metal-Free Catalyst for Hydrazine Electrooxidation" *Adv. Mater.* **2014**, *26*, 6510–6516.

(100) Almeida, V. C.; Silva, R.; Acerce, M.; Junior, O. P.; Cazetta, A. L.; Chhowalla, M.; Asefa, T.* "N-Doped Ordered Mesoporous Carbons with Improved Charge Storage Capacity by Tailoring N-Dopant Density with Solvent-Assisted Synthesis" *J. Mater. Chem. A*. **2014**, 2, 15181–15190.

(99) Sathe, B. R.; Zou, X.; Asefa, T.* "Metal-Free B-Doped Graphene with Efficient Electrocatalytic Activity for Hydrogen Evolution Reaction" *Catal. Sci. Technol*. **2014**, *4*, 2023–2030.

(98) Al-Sharab, J.*; Mikmekova, E.; Das, S.; Goswami, A.; El-Sheikh, S. M.; Ismail, A. A.; Hesari, M.; Maran, F.; Asefa, T. "Low Energy TEM Characterizations of Ordered Mesoporous Silica-Based Nanocomposite Materials for Catalytic Applications" *Microsc. Microanal.* **2014**, 20, 1900-1901.

(97) Zou, X.; Huang, X.; Goswami, A.; Silva, R.; Sathe, B. Asefa, T.* "Cobalt-Embedded Nitrogen-Rich Carbon Nanotubes Efficiently Catalyze Hydrogen Evolution Reaction at All pH Values" *Angew. Chem. Int. Ed.* **2014**, *53*, 4372–4376;

Featured in Chemical and Engineering News (C&EN): Vol. 92, Issue 14, P. 34, April 7, 2014.

And also received wide public interest and media attention as well, including at the following sites:

http://www.csmonitor.com/Environment/Energy-Voices/2014/0717/For-clean-energy-think-small-nano-small

http://www.hngn.com/articles/36057/20140714/clean-burning-hydrogen-fuel-technology-developed-at-rutgers-university.htm

http://news.rutgers.edu/news/rutgers-chemists-develop-technology-produce-clean-burning-hydrogen-fuel/20140713#.U8PWbpRdU1E

http://oilprice.com/Latest-Energy-News/World-News/A-Cheaper-Way-To-Make-Hydrogen-Fuel.html

http://www.sciencedaily.com/releases/2014/07/140714104100.htm

http://phys.org/news/2014-07-chemists-technology-clean-burning-hydrogen-fuel.html

http://www.nasdaq.com/article/using-nanotubes-to-make-cheaper-cleaner-hydrogen-fuel-cm370837

http://blog.nj.com/new_jersey_businesses_whats_happening/2014/07/rutgers_chemist_teddy_asefa_develops_patent_pending_technology_to_produce_clean-burning_hydrogen_fue.html

http://www.nanowerk.com/nanotechnology-news/newsid=36521.php

http://www.centraljersey.com/articles/2014/07/28/newswire/doc53d6a15655540093861486.txt

http://dailyfusion.net/2014/07/commercially-viable-hydrogen-production-30596/

http://wattsupwiththat.com/2014/07/14/the-law-of-unintended-consequences-in-action-imagine-replacing-all-co2-emissions-with-h2o-emissions/

http://www.engineering.com/DesignerEdge/DesignerEdgeArticles/ArticleID/8031/Rutgers-Chemists-Develop-Technology-to-Produce-Clean-Burning-Hydrogen-Fuel.aspx

http://www.ethiomedia.com/17file/2506.html

http://fuelcellsworks.com/news/2014/07/14/rutgers-chemists-develop-technology-to-produce-clean-burning-hydrogen-fuel/

http://www.spacedaily.com/reports/Rutgers_Chemists_Develop_Technology_to_Produce_Clean_Burning_Hydrogen_Fuel_999.html

http://www.energy-daily.com/reports/Rutgers_Chemists_Develop_Technology_to_Produce_Clean_Burning_Hydrogen_Fuel_999.html

http://nanocomputer.com/?tag=rutgers-university

http://besttopics.net/link/74522_technology-produces-clean-burning-hydrogen-fuel

http://www.isssource.com/new-way-to-produce-hydrogen-fuel/

http://beforeitsnews.com/energy/2014/07/carbon-nanotubes-may-replace-platinum-to-produce-hydrogen-2454822.html

http://www.kurzweilai.net/a-cost-effective-nanotube-based-catalyst-for-producing-hydrogen-fuel

http://www.feedthegrid.net/related/310548/montgomerys-teddy-asefa-develops-patent-pending-technology-to-produce-/

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(2) Yoshina-Ishii, C.; Asefa, T.; Coombs, N.; MacLachlan, M. J.; Ozin, G. A. "Periodic mesoporous organosilicas, PMOs: fusion of organic and inorganic chemistry 'inside' the channel walls of hexagonal mesoporous silica" *Chem. Commun.* **1999***,* 2539-2540. ***(Cited 315 times to date)*** •••

(1) Lal, M.; Joshi, M.; Kumar, D.N.; Friend, C.S.; Winiarz, J.; Asefa, T.; Kim, K.; Prasad, Paras N. "Inorganic-organic hybrid materials for photonics" *Mater. Res. Soc. Symp. Proc.* **1998,** *519,* 217-225.

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Patents:

(1) Inventors: Asefa, T.*, Fuller, R.; Schiff, E. A.
"Mesoporous and Nanoporous Materials, and Methods of Synthesizing the Same"
US Patent Application Number: 20100313937; Application Date: 12-16-2011

(2) Inventors: Asefa, T.*, Shi, Y.-L.
"Corrugated and Nanoporous Microstructures and Nanostructures, and Methods for Synthesizing the Same"
US Patent Application Number: 20100093013; Application Date: 04-15-2010

(3) Inventors: Asefa, T.*, Sharma, K. K., Anan, A.
"Selective and Efficient Bifunctional and Trifunctional Nanoporous Catalysts"
US Patent Application Number: 20090043134; Application Date: 02-12-2009

(4) Inventors: W. Whitnal, T. Asefa, G. A. Ozin
"Hybrid Organic-Inorganic Mesoporous Materials", Licenced to The Governing

Council of the University of Toronto, Canada.
US Patent Application Number: US 2008/0193734 A1; Patent Filed: 03/16/2005.

(5) Inventors: T. Asefa and G. A. Ozin
"Functionalized organometallic crystalline Mesoporous material prepared by metalation-condensation of organometallic compounds"
Licenced to ExxonMobil Research and Engineering Company, USA.
US Patent ***US 6,960,551.***

(6) Inventors: T. Asefa and A. V. Biradar
"Gold Nanocatalysts and Methods of Use Thereof"
U.S. Provisional Patent Application No. 61/484,040; Application Number: 13/467,492; Filed on May 9, 2011.

(7) Inventors: T. Asefa, A. V. Biradar and Y. Wang
"Efficient and Recyclable Heterogeneous Nanocatalysts"
United States Patent Application No. 13/396,052; Filed February 14, 2012

(8) Inventors: T. Asefa and R. Silva
"Carbon Nanoneedles and Methods of Use Thereof"
Invention Disclosure; Patent Application in Progress.

(9) Inventors: T. Asefa and R. Silva
"Continuous and Selective Henry Reaction over Nanoporous Silica-Supported Amine Catalyst on Fixed Bed Reactor"
Invention Disclosure; Patent Application in Progress.

Invited Talks and Conference Presentations:

2015

117) Invited Talk, International Workshop on Graphene and C_3N_4-based Photocatalysts, Wuhan University of Technology, Wuhan, China; June 2015.
116) Invited Talk, Sustainable Nanotechnology Conference, Venice, Italy; March 2015.
115) Invited seminar at the Ernest Mario School of Pharmacy, Rutgers University, Piscataway, NJ; January 2015.
114) Invited seminar at the Hungry Minds seminar series at City Science Center, Technology and Research Park in Philadelphia, Philadelphia, PA; January 2015.

2014

113) Invited talk, Symposium on Advanced Materials at the Graduate School of Materials Science, Osaka Prefecture University, Osaka, Japan; November 2014.
112) Invited talk, Department of Chemistry, Graduate School of Science, Kyoto University, Kyoto, Japan; November 2014.

111) Research talk, The 22nd International Conference on Composites/Nano Engineering. (ICCE-22), Malta; July 2014.
110) Invited talk at 7th International Symposium of Nanoporous Materials (Nano-7), Niagara Fall, Ontario, Canada; June 2014.
109) Invited talk in the Department of Chemical Engineering at City College, City University of New York, New York; March 2014.
108) Invited talk in the Department of Physics at Seton Hall University, South Orange, New Jersey; March 2014.
107) Invited talk in the Department of Chemistry at William Paterson University, Wayne, New Jersey; February 2014.

2013

106) Invited Talk and participated on the International Forum in Chemical Process Intensification and Green Technology" at Beijing University of Chemical Technology (BUCT) in Beijing, China, September 2013.
105) Invited Talk on Nanotechnology, Summer School to Chinese Students and Delegates, Rutgers University, August 2013.
104) Invited research talk at the State University of Maringa, Mainga, Paraná State, Brazil, August 2013.
103) Invited talk at Brazil's National Laboratory, the Laboratório Nacional de Luz Síncrotron, in Campinas, Brazil, August 2013.
102) Invited talk in the Department of Chemistry at Universidade Estadual de Campinas (UNICAMP), Campinas, São Paulo State, Brazil, August 2013.
101) Invited research talk at Fuel Cell Research Center at Korea Institute of Science and Technology (KIST) in Seoul, South Korea, August 2013.
100) Invited research talk at LG Chem in Daejeon, South Korea, August 2013.
99) Invited research talk in the Nanotechnology Center at the Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea, August 2013.
98) Invited talk in Department of Chemistry at Yonsei University, Seoul, South Korea, August 2013.
97) Research talk, The 21st Annual International Conference on Composites/Nano Engineering. (ICCE-21), Tenerife, Canary Islands, Spain, July 2013.
96) Invited research talk in the School of Materials Science and Engineering at South China Science and Technology (SCUT) in Guangzhou, China, June 2013.
95) Invited Talk, University of Pennsylvania, Spring 2013.
94) Invited Talk, South China University of Technology (SCUT), Guangzou, China, Summer 2013.
93) Invited Talk, The 16th International Symposium on Relations between Homogeneous and Heterogeneous Catalysis (ISHHC-16), Hokkaido University, Sapporo, Japan, Summer 2013.
92) Invited Talk, The 21st Annual International Conference on Composite / Nano Engineering (ICCE – 21) Tenerife, Spain Summer, 2013.
91) Invited Talk on Nanotechnology for Beijing Science and Technology Delegates at Rutgers University, Summer 2013.

2012

90) Invited Talk, Catalysis Club of Philadelphia Symposium, Wilmington, DE; June 2012.
89) Invited Talk, National Science Foundation; Ceramics Division; June 2012.
88) Invited Speaker, 42nd Organic Catalysts Research Society Symposium, Annapolis, MD; April 2012.

2011

87) Invited Talk, ChemShow 2011 and Nanotechnology Conference, Basic Chemistry of Green/Bio-Nano Convergence, New York City, November 1, 2011.
86) Invited Speaker, 9th International Nanomedicine and Drug Delivery Symposium, NanoDDS'11, Salt Lake City, UT, October, 2011.
85) Invited Oral Presentation, Joint Rutgers-BASF Catalysis Meeting, Nutley, NJ, May 2011.
84) Oral Presentation, 85th ACS Colloid and Surface Science Symposium, Montreal, Quebec, Canada, July 2011.
83) Keynote Lecture, Omega Chi Epsilon (the American Honor Society for Chemical Engineering Students) induction, Rutgers University, Piscataway, NJ, Spring 2011.
82) Invited Lecture, Nanomaterials Class, Materials science and Engineering Department, Rutgers University, Piscataway, NJ, Spring 2011.
81) Invited Lecture, Nanomedicine Class, Biomedical Engineering Department, Rutgers University, Piscataway, NJ, Spring 2011.

2010

80) Invited Talk, Pacifichem, Honolulu, Hawaii, December 2010.
79) Invited Poster Presentation, NSF Ceramic Materials Principal Investigator Workshop, National Science Foundation, Washington, DC, September 2010.
78) Oral Presentation, New Graduate students, Chemical and Biochemical Engineering Department, Rutgers, Piscataway, NJ, September 2010.
77) Oral Presentation, Rutgers Governors' School, Piscataway, NJ, Summer 2010.
76) Invited Talk, Joint Princeton-Rutgers Research Conference, Princeton University, Princeton, NJ, Spring 2010.
76) Invited Talk, Joint Rutgers-Roche Research Meeting, Roche, Nutley, NJ, March, 2010.
75) Poster Presentation, 239th ACS National Meeting, San Francisco, Spring 2010.
74) Oral Presentation, 239th ACS National Meeting, San Francisco, Spring 2010.
73) Invited Lecture, Nanomaterials Class, Materials science and Engineering Department, Rutgers University, Piscataway, NJ, Spring 2010.
72) Invited Talk, IGERT Students, Rutgers University, Piscataway, NJ, Spring 2010.
71) Invited Talk, City College, City University of New York, April 2010.
70) Invited Talk, New Jersey Institute of Technology (NJIT), March 2010.

2009

69) Invited Talk, Rutgers University at Newark, Newark, NJ, October 2009.
68) Invited Talk, Fairleigh Dickinson University, Madison, NJ, September 2009.
67) Invited Talk, International Conference on Multifunctional, Hybrid and Nanomaterials, Hybrid Materials 2009, March 2009, Tours, France.
64) Invited Talk, Rutgers University, New Brunswick, NJ, February 2009.
63) Invited Visit, vant Hoff's Institute of Molecular Sciences, University of Amsterdam, Amsterdam, the Netherlands, February 2009.
62) 237th American Chemical Society National Meeting "Efficient and selective nanoporous heterogeneous catalysts for various (tandem) reactions" *Oral Presentation*, Inorganic Division, March 2009, Salt Lake City, UT, USA
61) 237th American Chemical Society National Meeting "Corrugated and nanoporous nanopheres for drug delivery and biosensing applications" *Oral Presentation*, Division of Colloid & Surface Chemistry, Applications in Nanoscience, March 2009, Salt Lake City, UT, USA.
60) 237th American Chemical Society National Meeting "Functionalized nanospheres for targeted drug delivery applications and their biocompatibility (cytotoxicity)" *Oral Presentation*, Division of Inorganic Chemistry, Materials Applications, March 2009, Salt Lake City, UT, USA.

2008

59) Invited Talk "Food Nanotechnology", Cornell University, September 2008.
58) Invited Talk, GoNano Symposium, University of Toronto, Toronto, Canada, October 2008.
57) Oral presentation, 235th American Chemical Society National Meeting "Multifunctional nanostructured materials and selective efficient catalysts: New synthetic strategies and their potential applications from catalysis to drug delivery" *Oral Presentation*, March 2008, New Orleans, LA, USA
56) Oral Presentation, 235th American Chemical Society National Meeting, March 2008, New Orleans, LA, USA.
55) Oral presentation, 235th American Chemical Society National Meeting, "Antibody-conjugated gold nanoparticles for detection of pathogens in water" COLL-146, New Orleans, LA, April 2008.
54) Invited Talk at International Symposium of Nanoporous Materials – V, Vancouver, British Columbia, May 2008.
53) Invited Talk at 82nd ACS Colloid and Surface Science Symposium, North Carolina State University, Raleigh, NC, June 2008.

2007

52) Department of Chemistry, Utica College, Utica, NY, Nov. 2007
51) Participant and Invited talk at O'Brien & Gere / Syracuse University /SUNY ESF Technology Day Conference, Spring 2007
50) Department of Chemistry, Kenyon College, Gambier, OH, 2007.
49) Oral presentation, American Chemical Society National Meeting, Chicago, IL, Spring 2007

48) Poster presentation, American Chemical Society National Meeting, Chicago, IL, Spring 2007
47) Invited Speaker at Café Scientifique, "Nanoscience and Nanotechnology: About Little Things but Big Science and Technology" Milton Rubenstein Museum of Science and Technology, Syracuse, NY, Feb. 2007
46) Invited Panelist and Speaker at SBIR Conference, Sheraton Hotel, Syracuse University, Mar. 2007
45) Invited Panelist and Speaker at Accelerate 2007, A Syracuse Central New York on New Ideas in Technology, Manufacturing, Energy and the Environment, Apr. 2007
44) Invited Lecture, Syracuse University Project Advance (SUPA), Syracuse, Oct. 2007
43) Invited Lecture, Syracuse University Project Advance (SUPA), New York City, Nov. 2007
42) Department of Chemistry, SUNY - Albany, Nov. 2007.
41) Department of Chemistry, College of Staten Island, Nov. 2007
40) Session Chair, American Chemical Society, Inorganic / Materials Chemistry, Chicago, IL, Spring 2007

2006

39) Department of Physics, Syracuse University, Syracuse, NY, Jan. 2006
38) Department of Chemistry, University of Missouri at Rolla, Rolla, MO, Mar. 2006
37) The 231st American Chemical Society (ACS) National Meeting, Atlanta, GA, Mar. 2006
36) Cornell Nanoscale Facility, Cornell University, Ithaca, NY, Jun. 2006
35) Invited Talk (Main Group Chemistry), American Chemical Society, 35th Northeast Regional Meeting (NERM), 2006, Binghamton, NY, Oct. 2006
34) Invited Talk (Recent Advances in Materials Chemistry), American Chemical Society, 35th Northeast Regional Meeting (NERM), 2006, Binghamton, NY, Oct. 2006
33) Participant and Invited Talk at Nanocuse Conference, SUNY ESF April 2006
32) Department of Chemistry, Utica College, Utica, NY, Nov. 2007
31) Department of Chemistry, Lehigh University, Bethlehem, PA, Nov. 2006
30) Participant and Invited talk at O'Brien & Gere / Syracuse University /SUNY ESF Technology Day Conference, March 2006.
29) Department of Chemistry, Kenyon College, Gambier, OH, 2007.
28) Two Oral presentations and 2 Poster presentations at the American Chemical Society National Meeting, Chicago, Spring 2007.
27) Invited Speaker at Café Scientifique, "Nanoscience and Nanotechnology: About Little Things but Big Science and Technology" Milton Rubenstein Museum of Science and Technology, Syracuse, NY, February 2007.
26) Invited Panelist and Speaker at SBIR Conference, Sheraton Hotel, Syracuse University, March 2007.
25) Invited Panelist and Speaker at Accelerate 2007, A Syracuse Central New York on New Ideas in Technology, Manufacturing, Energy and the Environment, April 2007.
24) Invited Lecture, Syracuse University Project Advance (SUPA), Syracuse, Oct. 2007

23) Invited Lecture, Syracuse University Project Advance, New York City, Nov. 2007.
22) Department of Chemistry, SUNY - Albany, Nov. 2007
21) Department of Chemistry, College of Staten Island, Nov. 2007

2005

20) Department of Chemistry, Alfred University, Nov. 2005
19) Department of Biomedical and Chemical Engineering, Syracuse University, Nov. 2005

Invited Talks as a Graduate Student and Post-doctoral Fellow:

2005

18) Department of Chemistry, SUNY at Binghamton, Jan. 2005
17) Department of Materials Science and Engineering, University of Delaware, Feb. 2005
16) Department of Chemistry, York University, Canada, Feb. 2005
15) Department of Chemistry, Rochester Institute of Technology, Feb. 2005
14) Department of Chemistry, University of Iowa, Mar. 2005
13) Nanoscience Technology Center, University of Central Florida, Mar. 2005
12) Department of Engineering and Applied Sciences, Harvard University, Mar. 2005
11) Department of Ceramics and Materials Engineering, Rutgers University, April 2005
10) Department of Engineering Sciences and mechanics, Pennsylvania State University, Apr. 2005

2004

9) Department of Chemistry, University of California at Santa Cruz, Feb. 2004
8) Department of Chemistry, University of Waterloo, Feb. 2004
7) Department of Chemistry, Florida State University, Dec. 2004
6) Department of Chemistry, University of Western Ontario, Canada, Jan.2004
5) Department of Materials Science and Engineering, University of California at Berkeley, Apr. 2004
4) Department of Chemistry, Arizona State University, Mar. 2004
3) Department of Chemistry, Concordia University, Jan 2004

2003

2) Department of Chemistry, Western Michigan University, Dec. 2003

2002

1) Institute for Microstructural Sciences, National Research Council (NRC), Ottawa, Canada, Dec. 2002.

Research Group Activities / Students Mentored or Being Mentored in Asefa Lab:

11 Post-Doctoral Fellows and Visiting Professors:

Prof. Jianping Du (Currently working with in Asefa Group at Rutgers)
Dr. Anandarup Goswami (Currently working Research position at Regional Centre of Advanced Technologies and Materials (RCPTM), Palacky University, Olomouc, Czech Republic
Dr. Xiaoxin Zou (Currently, Associate Professor at Jilin University)
Prof. Vitor Almeida (Currently working at State University of Maringa, Brazil)
Prof. Bhaskar Sathe (Currently working Dr. Babasaheb Ambedkar Marathwada University, India)
Prof. Eun Woo Shin (Currently at University of Ulsan, South Korea)
Dr. Zhimin Tao (Currently a Post-doctoral Associate at MIT)
Dr. Yan-Li Shi (Currently at Syracuse University)
Dr. Randy S. Rarig (Currently working at Pfizer, NY)
Dr. Yanfei Wang (Currently working at China Petroleum and Petrochemical Engineering Research Institute (CPPEI) in Beijing, China)
Dr. Ankush Biradar (Currently National Chemical Laboratory, NCL, in India)
Dr. Jafar Al-Sharab (Currently working at PolyNYU-NYC)

27 graduate students have been or are being advised:

Dr. Sayantani Das (Completed PhD in 2012 and is currently a Post-Doctoral Fellow at Max Plank Institute Mulheim)
Dr. Saquib Ahmed (Completed PhD in 2011 and is currently working at Intel)
Dr. Krishna K. Sharma (Completed PhD in 2010 and is currently a Post-Doctoral Fellow at Massachusetts Institute of Technology)
Dr. Gang Wang (Completed PhD in 2012 at Syracuse)
Dr. Cole Duncan (Completed PhD in 2010 and is currently a Law Student at Franklin Pierce Law School at University of New Hampshire)
Dr. Rafael da Silva (Currently an Associate Professor at State University of Maringa, Brazil)
Xiaoxi Huang (Currently PhD student in Department of Chemistry and Chemical Biology at Rutgers)
Katherine Koh (Currently an MSC student in Department of Chemistry and Chemical Biology at Rutgers)
Yuying Meng (Currently a PhD student in Asefa Lab)
Rajyalakshmi Vathyam (completed MSc thesis and currently working at Medtronic Inc, Warsaw, Indiana, USA)
Saravana Kumar (Currently a PhD student in Germany)
Archana Biradar (Currently working as National Chemical Laboratory, India)
Richard Mishler (PhD student at Rutgers, deceased in 2011)
Yang Wang (Currently a PhD student at SUNY-ESF, Syracuse, NY)
Rachit Jain (Completed MSc study and student in Department of Chemical and Biochemical Engineering at Rutgers)

Flavian Patrao (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Chi-han Huang (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Kanak Kuwelkar (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Alessandro Campos (Currently a PhD student in Department of Chemistry and Chemical Biology at Rutgers)
Marina Kalpouzos (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Viral Sagar (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Kanak Kuwelkar (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Apoorva Vadlamani (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Ahmed Jaffar (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Tao Zhang (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Jay Mehta (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)
Vanessa Hafemann (Currently an Exchange PhD Student in Department of Chemistry and Chemical Biology from Brazil)
Elizangella Hafemann (Currently an Exchange PhD Student in Department of Chemistry and Chemical Biology from Brazil)
Yue Sun (Currently an MSc student in Department of Chemical and Biochemical Engineering at Rutgers)

28 undergraduate students have been or are currently being advised:

- Amy Otuonye (Currently working at pulmonary group at the National Heart Lung Blood Institute at the National Institute of Health, NIH)
- Robert Buckley (Currently a Graduate Student in Dental School at the University of Maryland, College Park, MD)
- Kelley Denton (Currently Teach for America - Vivian T. Thomas Medical Academy and W.E.B Dubois High School and MA student Johns Hopkins University, Teaching Department, Baltimore, MD)
- Sean Quinlivan (Currently a graduate student at University of California at Riverside),
- Johanna Weisenbauer (Currently a graduate student at the Technical University of Graz, Austria)
- Semonti Sinharoy (Was at University of Kansas)
- Elizabeth Blair (Currently Pharmacy student at University of Pennsylvania)
- Chauncey Brown (Currently at Syracuse University)
- Tobias Abel (Currently a graduate student at the Technical University of

Graz, Austria)
- Duncan Dam (Currently a graduate student at Northwestern University)
- Stephanie Flitsch (Currently a graduate student at the Technical University of Graz, Austria)
- Muzhi (Luke) Liu (Currently a graduate student at Syracuse University)
- David Brown (Currently at Rice University)
- Nicauris Batista (Currently at Syracuse University)
- Mukund Patel (Currently at Rutgers University at New Brunswick)
- Stephanie Hayes (Currently a Nursing Student at Johns Hopkins University, Baltimore, MD)
- Ridhima Oberai (Currently at Syracuse University)
- Cassidy Henneman (Currently at Syracuse University)
- Chao Zhang (Currently at Syracuse University)
- Yulia Yevgenyeva (Currently at Syracuse University)
- Elisabeth Wondimu (Currently a PhD student at Memorial Sloan-Kettering Cancer Center and Cornell University)
- Yesha Kathrani (Currently at Rutgers University at New Brunswick)
- Dhara Patel (Currently at Rutgers University at New Brunswick)
- Peter Lobaccaro (Visiting summer student from University of Notre Dame and joint student with Prof. Charles Dismukes at Rutgers University at New Brunswick)
- Tejas Shah (Currently at Rutgers University at New Brunswick)
- Tahia Haque (Currently at Rutgers University at New Brunswick)
- Stephanie Jou (Currently at Rutgers University at New Brunswick)
- Chris Beyel Currently at Rutgers University at New Brunswick)
- Dandarha Pigotti (Exchange student from Brazil)

6 High-school students have been mentored in summer research in Asefa Lab:

- Bryan Cargill
- Peter Godart
- Nicholas Lavrov
- Nicholas Phillips
- Natenapa "Sonic" Simpkins
- Tiffany Sun

Collaborators between 2005-Present

1) *Prof. Flavio Maran,* University of Padova, Italy.
2) *Prof. Eric Schiff*, Physics Department, Syracuse University.
3) *Prof. Vivek Polshettiwar*, Director of Ctaalysis Center, Tata Institute for Fundamental Research (TIFR), India.
4) *Prof. James C. Dabrowiak,* Chemistry Department, Syracuse University, USA.
5) *Prof. Mietek Jaroniec*, Kent State University, USA.
6) *Prof. Gadi Rothenberg*, Vant Hoff's Institute of Molecular Sciences, University of Amsterdam, The Netherlands.
7) *Prof. Jerry Goodisman,* Chemistry Department, Syracuse University, USA.

8) *Prof. Vitor Almeida,* State University of Maringa, Maringa, Brazil.
9) *Prof. Michal Kruk*, College of Staten Island, City University of New York, NY, USA.
10) *Prof. Jing Li*, Department of Chemistry and Chemical Biology, Rutgers University, USA.
11) *Prof. Charles Dismukes*, Department of Chemistry and Chemical Biology, Rutgers University, USA.
12) *Prof. Abdul-Kader Souid,* SUNY Upstate Medical University, Syracuse, NY, USA / Department of Pediatrics, University of United Arab Emirates, UAE.
13) *Prof. Chris Howarth*, Department of Physiology, College of Medicine and Health Sciences, UAE.
14) *Prof. Ernest Adeghate*, Department of Anatomy, Faculty of Medicine & Health Sciences United Arab Emirates University, UAE.
15) *Prof. Alan Goldman*, Department of Chemistry and Chemical Biology, Rutgers University, USA.
16) *Prof. Robert Niederman*, Department of Molecular Biology and Biochemistry, Rutgers University, USA.
17) *Dr. Aurelien Di Pasquier*, Department of Materials Science and Engineering, Rutgers University, USA.
18) *Dr. Detlef Smilgies*, Cornell High Energy Synchrotron Radiation Source (CHESS), Cornell University, USA.
19) *Prof. Dunbar Birnie*, Department of Materials Science and Engineering, Rutgers University, USA.
20) *Prof. Edson Leite,* Materials Engineering Department, *Federal* University of *São Carlos*, São *Carlos*, Brazil.
21) *Prof. Evgeny Dikarev*, Department of Chemistry, SUNY at Albany, USA.
22) *Dr. Manoj B. Gawande*, Regional Centre of Advanced Technologies and Materials, Faculty of Science, Palacky University, Olomouc, Czech Republic.
23) *Dr. Eliška Mikmeková,* Institute of Scientific Instruments of the ASCR, Brno, Czech Republic.
24) *Prof. Marina Petrukhina*, Department of Chemistry, SUNY at Albany, USA.
25) *Prof. Laura Fabris,* Department of Materials Science and Engineering, Rutgers University, USA.
26) *Prof. Manish Chhowalla,* Department of Materials Science and Engineering, Rutgers University, USA.
27) *Prof. Tamara Minko*, Department of Pharmaceutics, Rutgers University, USA.
28) *Prof. Bozena Michniak-Kohn*, Department of Pharmaceutics, Rutgers University.
29) *Prof. Zhongwu Liu,* School of Materials Science and Engineering, South China University of Technology (SCUT), China.
30) *Prof. Kazuki Nakanishi*, Department of Chemistry, Kyoto University, Kyoto, Japan.
31) *Prof. Kayuyoshi Kanamori*, Department of Chemistry, Kyoto University, Kyoto, Japan.
32) *Prof. Xiaoxin Zou*, Department of Chemistry, Jilin University, China.
33) *Prof. Rafael Silva*, Department of Chemistry, Maringa State University, Brazil.
34) *Prof. Vitor Almeida*, Department of Chemistry, Maringa State University, Brazil.

35) *Dr. Radek Zboril*, Regional Centre of Advanced Technologies and Materials, Faculty of Science, Palacky University, Olomouc, Czech Republic.