

CURRICULUM VITAE

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EDUCATION

Ph.D., Cornell University, NY, USA Department of Fiber Science	2016
M.Sc., Tuskegee University, AL, USA Department of Mechanical Engineering	2012
B.Sc., BUET, Dhaka, Bangladesh Department of Mechanical Engineering	2005

PROFESSIONAL EXPERIENCE

Assistant Professor Mechanical and Aerospace Engineering, University of Houston	2024 – Present
Assistant Research Professor Material Science & NanoEngineering, Rice University	2021 – 2024
Research Scientist Material Science & NanoEngineering, Rice University	2019 – 2021
Postdoctoral Research Associate Material Science & NanoEngineering, Rice University	2018 – 2019
Postdoctoral Research Associate Mechanical Engineering, Cornell University	2017 – 2018
Graduate Research Assistant Fiber Science, Cornell University	2012 – 2016
Graduate Research Assistant Materials Science & Engineering, Tuskegee University	2010 – 2012
Assistant Manager, Procurement Division (Head Office) Rural Power Company Limited (RPCL), Dhaka, Bangladesh	2007 – 2010
Plant Engineer, Mechanical Maintenance Division (Power plant) Rural Power Company Limited, Dhaka, Bangladesh	2005 – 2007

RESEARCH PUBLICATIONS

Google Scholar Link: <https://scholar.google.com/citations?user=hky0f9UAAAAJ&hl=en>

8 patents and 73 journal articles with an h-index of 36 and citations ~ 5100

Peer Reviewed Journal Articles (* indicates corresponding author)

73. Saadi, M.A.S.R.; Likhi, F.H.; Zahin, F.; Yuan, Y.; Karim, A.; Ajayan, P.M.; Rahman, M.M.* Algae-derived nacre-like dielectric bionanocomposite with high loading hexagonal boron nitride for green electronics. **ACS Nano** 2024, 18, 48, 33081–33096.
72. Thakur, M.S.H.; Nath, M.D.; Paulino, G.H.; Ajayan, P.M.; Rahman, M.M.* Macroscale Ceramic Origami Structures with Hyper-elastic Coating. Accepted in **Advanced Composites and Hybrid Materials**.
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70. Likhi, F.H.; Singh, M.; Potdukhe, H.; Ajayan, P.M.; Rahman, M.M.; Karim, A. Tuning Dielectric Properties with Nanofiller Dimensionality in Polymer Nanocomposites. **ACS Applied Materials and Interfaces** 2024, 16, 42, 57253-57267.
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68. Thakur, M.S.H.; Shi, C.; Logan, K.; Saadi, M.A.S.R.; Naskar, A.; Ajayan, P.M.; Rahman, M.M.* Three-dimensional Printing of Wood. **Science Advances** 2024, 10, eadk3250.
67. Zinke, A.; Pottackal, N.; Zahin, F.; Nur, I.; Ahmed, F.; Ji, Y.; Mohammed, Z.; Meyer, M.D.; Miller, C.; Bennett, M.; Rangari, V.; Meredith, J.; Ajayan, P.M.; Rahman, M.M.* Preserving fresh eggs via egg-derived bio-nanocomposite coating. **Advanced Functional Materials** 2024, 2310091.
66. Sajadi, M.S.; Das, R.; Thakur, M.S.H.; Boul, P.; Rahman, M. M.*; Tiwary, C.S.; Ajayan, P.M. Direct Ink Writing of Metals, Multi-metals, and Metal/Non-metal Interfaces. **Journal of Materials Science** 2025, 60, 1290-1300.
65. Sourov, M.A.; Emu, S.I.; Thakur, M.S.H.; Morshed, A., Rahman, M.M.*. A General Simulation based Study on Printability of Inks in Direct Ink Writing. **Scientific Reports** 2025, 15, 9842.
64. Gayle, J.; Hardian, R.; Guo, G.; Wang, X.; Rahman, M.M.; Verduzco, R.; Vajtai, R.; Ajayan, P.M.; Roy, S.; Szekely, G. Fluorinated 2D conjugated porous organic polymer films with modular

structural topology for controlled molecular sieving. **Journal of Materials Chemistry A** 2024, 12, 23023-23034.

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58. Islam, J.; Obulisamy, P.K.; Upadhyayula, V.K.K.; Dalton, A.B.; Ajayan, P.M.; Rahman, M.M.*; Tripathi, M.; Sani, R.; Gadhamshetty, V. Few Layered Graphene for Microbial Methanol Fuel Cells. **ACS Nano** 2023, 17, 1, 137-145.
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54. Saadi, M.A.S.R.; Advincula, P.A.; Thakur, M.S.H.; Khater, A.; Saad, S.; Zeraati, A.s.; Nabil, S.K.; Zinke, A.; Roy, S.; Lou, M.; Bheemasetti, S.N.; Bari, M.A.A.; Zheng, Y.; Beckham, J.L.; Gadhamshetty, V.; Vashisth, A.; Kibria, M.G.; Tour, J.M.; Ajayan, P.M.; Rahman, M.M.* Sustainable Valorization of Asphaltene via Flash Joule Heating. **Science Advances** 2022, 8, eadd3555.
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Book Chapters

1. Rahman, M.M.; Netravali, A. N. ‘Green’ Resins from Plant Sources and Strengthening Mechanisms. Book Chapter in *Advanced Green Composites* published by Scrivener Publishing.

Patents

8. Sajadi, S. M.; Boul, P. J.; Tiwary, C.S.; Rahman, M. M.; Ajayan, P. M.; Thaemlitz, C. Direct Ink Printing of Multi-material Composite Structures. US Patent Application No.: 17/575, 177, 2023.
7. Patel, H. A.; Khater, A.; Boul, P. J.; Ajayan, P. M.; Rahman, M. M. Cementing a wellbore using a direct ink printing. US Patent Application No.: 17/551, 051, 2023.
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4. Patel, H. A.; Khater, A.; Boul, P. J.; Ajayan, P. M.; Rahman, M. M. 3D Printed Polyrotaxane Additives and Compositions. US Patent Application No.: 17/550, 631, 2023.
3. Rahman, M. M.; Jung, S.; Pottackal, N.; Ajayan, P. M. Poly-albumen based green coating to enhance shelf life of perishable foods. US Patent Application No.: 17/373, 316, 2022.
2. Sajadi, S. M.; Kumar, A.; Boul, P. J.; Rahman, M. M.; Thaemlitz, C.; Ajayan, P. M. Additive manufacturing-assisted method for making structural elements having controlled failure characteristics. US Patent Application No.: 16/874, 449, 2021.
1. Rahman, M. M.; Sajadi, S. M.; Kumar, A.; Boul, P. J.; Thaemlitz, C.; Ajayan, P. M. Cement-based direct ink for 3D-printing of complex architected structures. US Patent Application No.: 16/596, 396, 2020.

In Review

4. Rahman, M.M.*, Ajayan, P.M. Interfaces in fibers and matrices of nanocomposites (Invited Perspective). **Nature Nanotechnology**.
3. Cui, Y.; Saadi, M.A.S.R.; Hassan, S.; Harikrishnan, V.; Siqueira, I.R.; Moon, R.; Kotov, N.; Pasquali, M.; Bennet, M.; Ajayan, P.M.; Rahman, M.M.* Flow-induced 2D nanomaterials intercalated robust bacterial nanocellulose. **Nature Communications**.
2. Khater, A.; Kamble, M.; Patel, H.; Boul, P.; Hamed, M.; Picu, K.; Koratkar, N.; Singh, H.; Tiwary, C.S.; Ajayan, P.M.; Rahman, M.M.* Hexagonal Boron Nitride reinforced quick-setting multifunctional cement. **Macromolecules**.
1. Bhattachariya, S.; Yuan, F.; Shi, C.; Mahendranath, A.; Yadav, R.M.; Roy, S.; Rahman, M.M.*; Ajayan, P.M. Fiber-reinforced nanocomposite aerogels for removal of oil spills. **Chemical Engineering Journal**.

SPONSORED RESEARCH GRANTS

(In total 2.7 M in last 3 years)

Sponsor: Lockheed Martin Corporation

Project title: Three-dimensional (3D) Printing of impact-resistant ULTEM™ based structures

Duration: 05/2025-04/2026

PI: Pulickel M. Ajayan, Rice University, Co-PI: Muhammad M. Rahman, University of Houston

Award: USD 99, 840 (USD 60, 000 awarded to Dr. Rahman)

Sponsor: Alberta Innovates – Technology Futures

Project title: Process Development for Transforming Alberta's Asphaltenes into High-value Carbon Fibers (Phase-III)

Duration: 02/2024 – 01/2027

PI: Md. Kibria, University of Calgary, Co-PI: Muhammad M. Rahman, Rice University

Award: CAD \$3,800,000 (CAD \$180,000 sub-awarded to Dr. Rahman)

Sponsor: National Science Foundation

Project title: PFI-TT: Developing Protein-based Edible Coatings to Extend the Shelf Life of Fruits and Vegetables

Duration: 04/2023-08/2025

PI: Muhammad M. Rahman, Rice University

Award: USD 249,610

Sponsor: United States Forest Service

Project title: Scaling up CNC-Agroprotein Nanocomposite Coating for Perishable Fruits

Duration: 09/2023-08/2026

PI: Muhammad M. Rahman, Rice University

Award: USD 468,000

Sponsor: Carbon Hub (Track II- A joint fund by Aramco, Sabic, and Shell), Rice University

Project title: Development of Carbon Nanotubes Fiber Reinforced Thermoplastic Composites

Duration: 01/2024 – 12/2026

PI: Muhammad M. Rahman, Rice University, Co-PI: Matteo Pasquali and Pulickel M. Ajayan, Rice University

Award: ~USD 700,000

Sponsor: Lockheed Martin Corporation

Project title: Three-dimensional (3D) Printing of ULTEM and High Z Materials

Duration: 04/2023-03/2024

PI: Muhammad M. Rahman, Rice University, Co-PI: Pulickel M. Ajayan, Rice University

Award: USD 99, 514 (USD 99, 514 awarded to Dr. Rahman)

Sponsor: Flowserve US, Inc

Project title: High-Temperature-Resistant Hierarchical 1D Nanofiber-2D Nanosheet Composite Coatings

Duration: 01/2023 – 06/2024

PI: Muhammad M. Rahman, Rice University, Co-PI: Dan Preston, Rice University

Award: USD 120,000 (USD 120,000 awarded to Dr. Rahman)

Sponsor: Flowserve US, Inc

Project title: Additive Manufacturing of High-Performance Polymeric Nanocomposites for Severe Service Applications

Duration: 01/2023 – 02/2024

PI: Muhammad M. Rahman, Rice University, Co-PI: Rafael Verduzco, Rice University

Award: USD 100,000 (USD 60,000 awarded to Dr. Rahman)

Sponsor: Carbon Hub (Track I), Rice University

Project title: Carbon Nanotubes Based Prepregs with Super-high-volume Fractions for advanced high-performance composites

Duration: 05/2022 – 12/2024

PI: Muhammad M. Rahman, Rice University

Award: USD 235,000

Alberta Innovates – Technology Futures

Project title: Process Development for Transforming Alberta's Asphaltenes into High-value Carbon Fibers (Phase-II)

Duration: 08/2021 – 01/2023

PI: Md. Kibria, University of Calgary, Co-PI: Muhammad M. Rahman, Rice University

Award: CAD \$500,000 (CAD \$250,000 awarded to Dr. Rahman)

U.S. Endowment for Forestry and Communities

Project title: Cellulose Nanocrystal-Protein Nanocomposite Coating for Perishable Fruits

Duration: 06/2021 – 12/2022

PI: Muhammad M. Rahman, Rice University

Award: USD 50,000

National Science Foundation

Project title: Reducing Food Waste: Commercialization of Protein-based Edible Coatings for Perishable Produce

Duration: 06/2021 – 11/2023

PI: Muhammad M. Rahman, Rice University

Award: USD 50,000

Alberta Innovates – Technology Futures

Project title: Process Development for Transforming Alberta's Asphaltenes into High-value Carbon fibers (Phase-I)

Duration: 08/2020 – 02/2021

PI: Md. Kibria, University of Calgary, Co-PI: Muhammad M. Rahman, Rice University

Award: CAD \$50,000 (CAD \$25,000 awarded to Dr. Rahman)

HONORS AND AWARDS

NSF Division of Civil, Mechanical, and Manufacturing Innovation, C-GCA academics	2024
Create the Future Design Contest, Tech Briefs, Honorable Mention	2024
Create the Future Design Contest, Tech Briefs, Honorable Mention	2022
Napier Rice Launch Challenge, 2 nd position, Advisor of Team 'EpiFresh'	2022
Rice Business Plan Competition, Semifinalist, Advisor of Team 'EpiFresh'	2022
BBC Bangla, Featured on coating for perishable foods as TV news on February 19	2022
The Daily Star, Featured on front page of leading newspaper on January 2	2022

Create the Future Design Contest, Tech Briefs, Winner, Sustainability Technologies	2021
National Science Foundation (NSF) I-Corps, Technical Lead	2021
Hershel M. Rich Invention Award, Rice University	2020
Southwest I-Corps (NSF) Technical Lead, Houston	2018
The Climate Reality Project Leader trained by Al Gore	2017
MiSK-UNDP Youth delegate, New York	2017
Sigma Xi- Research Society Symposium, Tuskegee University, 1 st prize	2012
Sigma Xi- Research Society Symposium, Tuskegee University, 3 rd prize	2011
BHEL-GE Gas Turbine Services (BGGTS) Ltd., India, Honorary award	2006
Technical Scholarship, Government of Bangladesh	2005

TEACHING EXPERIENCE

University of Houston

Additive Manufacturing (MECE 5397/6397), Instructor	Fall 2024
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Rice University

Additive Manufacturing (MSNE 413/513), Instructor	Fall 2022
Additive Manufacturing (MSNE 413/513), Instructor	Fall 2021
Additive Manufacturing (MSNE 413/513), Instructor	Fall 2020
Biomimetic Strategies (MSNE 555), Guest Lecturer	Spring 2018
Materials Science for Engineer (MSNE 301), Guest Lecturer	Fall 2018

Tuskegee University

Thermal Science Lab (MENG 412), Lab Instructor	Spring 2012
Strength of Materials (MENG 316), Guest Lecturer	Fall 2011
Fluid Mechanics (MENG 313), Teaching Assistant	Fall 2011
Engineering Economics (MENG 429), Teaching Assistant	Spring 2011
Dynamics (MENG 212), Teaching Assistant	Spring 2011
Design for Manufacturing (MENG 420), Teaching Assistant	Fall 2010

KEYNOTE AND INVITED TALKS

University of Houston, Department of Mechanical and Aerospace Engineering. Invited talk titled 'Additive Manufacturing of Diverse Materials for Green Future' on October 3, 2024

2nd International Conference on Mechanical, Manufacturing, and Process Engineering (ICMMPE). Keynote talk titled 'Materials Design via Additive Manufacturing for Sustainable Future' on May 30, 2024

University of North Carolina Charlotte, Department of Mechanical Engineering. Invited talk titled 'Advanced Manufacturing of Multifunctional Nanocomposites for Green Future' on April 2, 2024

University of South Florida, Department of Mechanical Engineering. Invited talk titled 'Advanced Manufacturing of Sustainable Nanocomposite for Green Future' on March 28, 2024

Virginia Tech, Department of Aerospace and Ocean Engineering. Invited talk titled 'Design and Manufacturing of Advanced Composite Structures- Challenges and Innovations' on March 20, 2024

University of Houston, Department of Mechanical Engineering. Invited talk titled 'Design and Manufacturing of Nanocomposite Materials for Green Future' on February 4, 2024

Society of Engineering Science (SES) Annual Technical Meeting 2023. Keynote talk titled 'Additive manufacturing of Wood-like Structures' on October 10, 2023

University of Sussex, Brighton, UK, NanoteC23 conference. Invited talk titled 'Design and Manufacturing of Carbon nanotube-polymer nanocomposites' on August 30, 2023

Case Western Reserve University, Materials Science and Engineering. Invited talk titled 'Sustainability in Materials and Design via Additive Manufacturing' on May 25, 2023

Michigan State University, School of Packaging. Invited talk titled 'Sustainable Composite Materials for Green Packaging: Challenges and Innovations' on April 28, 2023

University of Oklahoma, Aerospace and Mechanical Engineering. Invited talk titled 'Sustainable Composite Materials for Green Future: Challenges and Innovations' on March 20, 2023

Cornell University, NY, Department of Human Centered Design. Invited talk titled 'Sustainability in Design via Additive Manufacturing' on September 30, 2022

Multiscale Mechanical Modeling and Research Network (MMMRN). Invited talk titled 'Materials and Manufacturing for Sustainable Future: Challenges and Innovations' on January 15, 2022

International Biodeterioration & Biodegradation Symposium (IBBS18). Invited talk titled 'Multifunctional Bio-nanocomposite Coating for Perishable Produce' on September 09, 2021

Rice University, TX, 2nd Annual AMPT Symposium. Invited talk titled 'Additive Manufacturing of Multifunctional Materials' on January 22, 2021

MRS Spring/Fall Virtual Meeting 2020. Invited talk titled 'Engineered Interfaces in Composites' on November 28, 2020

South Dakota School of Mines, Electrical Engineering Seminar Series. Invited talk titled 'Additive Manufacturing of Multifunctional Materials' on November 12, 2020

Rice University, TX, MSNE Seminar Series. Invited talk titled 'Materials for Sustainable Future' on April 16, 2020

Rice University, TX, 2019-2020 Scientia Lecture Series. Invited talk titled 'Porous Materials: Rethinking Building Technologies' on September 17, 2019

Air Force Research laboratory, OH, Structural Materials Division. Invited talk titled 'Materials for Sustainable Future' on April 30, 2019

Oak Ridge National Laboratory, TN, MSTD. Invited talk titled 'Composite Materials: A Look from Different Angle' on December 08, 2017

Cornell University, NY, Department of Fiber Science. Invited talk titled 'Aligned Bacterial Cellulose as Green Nanofiber for Composite Materials' on September 22, 2016

SELECTED CONFERENCE PROCEEDINGS & PRESENTATIONS

Thakur, M. S. H.; Shi, C.; Rahman, M. M. Additive Manufacturing of Wood Nanocomposites Using Natural Fibers. American Society for Composites, 39th Annual Technical Conference, San Diego, CA, October 21, 2024.

Rahman, M. M., Cui, Y.; Saadi, M.A.S.R.; Strong and tough bacterial cellulose sheets and fibers. Fiber Society Fall Meeting, Philadelphia, PA, October 25, 2023.

Rahman, M. M., Cui, Y.; Jung, S.; Cellulose Nanocrystals (CNC) Reinforced Bio-composite Coating for Perishable Fruits. TAPPI International Conference on Nanotechnology for Renewable Materials, Vancouver, BC Canada, June 13, 2023.

Rahman, M. M., Cui, Y.; Jung, S.; Sustainable Bio-nanocomposite for Perishable Fruits. Fiber Society Fall Meeting, Raleigh, NC, October 21, 2022.

Cui, Y.; Jung, S.; Ajayan, P.M.; Rahman, M. M. Protein-Based Multifunctional Bionanocomposite- A Conformal Coating for Perishable Fruits. MRS Virtual Spring/Fall Meeting, November 27-December 04, 2020.

Rahman, M. M.; Netravali, A. N. From Agro-wastes to Advanced 'Green' Composites. CCMR Symposium, Cornell University, Ithaca, NY, May 19, 2015.

Rahman, M. M.; Netravali, A. N. From Agro-wastes to Advanced 'Green' Polymers for Automotive Composites. ACCE (Automotive Composites Conference & Exhibition), Society of Plastic Engineers, Novi, MI, September 09-11, 2014.

Rahman, M. M.; Islam, M. E.; Hosur, M. V.; Jeelani, S. Kinetics of Degradation of Epoxy Composites Modified with Reactive Polyol Diluent and Amino-functionalized Multiwalled Carbon Nanotubes. 45th International SAMPE Technical Conference (ISTC), Wichita, KS, October 21-24, 2013.

Rahman, M. M.; Zainuddin, S.; Hosur, M. V.; Malone, J. E.; Kumar, A.; Jeelani, S. Optimization of Low-Velocity Impact Properties of E-glass/epoxy Composites Using Plasticizing Modifiers. ASME International Mechanical Engineering Congress and Exposition, Houston, TX, November 09-15, 2012.

Rahman, M. M.; Hosur, M. V.; Zainuddin, S.; Vaidya, U.; Kumar, A.; Trovillion, J.; Jeelani, S. Effect of Amino-functionalized MWCNTs on High Velocity Impact Properties of E-glass/epoxy composites, American Society of Composites (ASC) conference, Arlington, TX, October 1-3, 2012.

Rahman, M. M.; Zainuddin, S.; Hosur, M. V.; Jeelani, S. Enhancement of Energy Absorption Capability of GFRP Composites Using Plasticizing Modifier, SAMPE Conference, Baltimore, MD, May 21-24, 2012.

Rahman, M. M.; Zainuddin, S.; Hosur, M.V.; Jeelani, S. Interlaminar Shear Strength Properties of E-glass/epoxy Nanocomposites Enhanced with Functionalized Multiwalled Carbon Nanotubes. Sigma Xi - The Scientific Research Society Symposium, Tuskegee University Chapter, Tuskegee, AL, April 27, 2012.

Rahman, M. M.; Zainuddin, S.; Hosur, M. V.; Kumar, A.; Trovillion, J.; Jeelani, S. Effect of Enhanced Crosslink Density on Interfacial Strength of E-glass/epoxy Composites Modified by Amino-functionalized MWCNTs. International Conference on Mechanical Engineering (ICME) conference, Dhaka, Bangladesh, December 18-20, 2011.

Rahman, M. M.; Zainuddin, S.; Hosur, M.V.; Jeelani, S. Experimental Study on the Effect of Enhanced Crosslink Density on Mechanical Properties of E-glass/epoxy Composites Modified with Amino-functionalized MWCNTs. ASME International Mechanical Engineering Congress and Exposition, Denver, CO, November 11-17, 2011.

Rahman, M. M.; Zainuddin, S.; Hosur, M. V.; Robertson, C. J.; Salam, M. B. A.; Kumar, A.; Jeelani, S. Experimental Investigation of E-glass/epoxy Composites Modified Using NH₂-MWCNTs through Sonication and Calendaring Methods, 43th International SAMPE Technical Conference (ISTC), Fort Worth, TX, October 17-20, 2011.

Rahman, M. M.; Zainuddin, S.; Hosur, M.V.; Jeelani, S. Flexure Properties of E-glass/epoxy Nanocomposites Enhanced with Functionalized Multiwalled Carbon Nanotubes. Sigma Xi - The Scientific Research Society Symposium, Tuskegee University Chapter, Tuskegee, AL, March 18-19, 2011.

ADVISING/MENTORSHIP EXPERIENCE

Ph.D. Students Supervised

Current

Mir Mohammad Fahad, Mechanical Engineering, University of Houston	2024 – present
Md. Tofazzal Hossain, Mechanical Engineering, University of Houston	2024 – present
Chen Shi, Materials Science and NanoEngineering, Rice University	2022 – present
M.A.S.R. Saadi, Materials Science and NanoEngineering, Rice University	2020 – present

Previous

Md. Shajedul Thakur, Materials Science and NanoEngineering, Rice University Now at University of Houston	2021 – 2024
Ali Khater, Materials Science and NanoEngineering, Rice University Now at Schlumberger Limited	2018 – 2023

M.Sc. Students Supervised

Nicholas Curtis, Materials Science and NanoEngineering, Rice University	2021 – 2023
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Postdoctoral fellows Supervised

Md. Shajedul Thakur, Mechanical Engineering, University of Houston	2024 – present
Reena Panchal, Mechanical Engineering, University of Houston	2024 – present

Visiting Scientist Supervised

Mohammed I. Nur, Materials Science and NanoEngineering, Rice University	2023 – 2024
Faravi Ahmed, Materials Science and NanoEngineering, Rice University	2022 – 2023
Farhan Zahin, Materials Science and NanoEngineering, Rice University	2022 – 2023
Fanshu Yuan, Ph.D. candidate in School of Chemical Engineering, primary supervisor Dongping Sun, Nanjing University of Science and Technology, China	2018 – 2019

Doctoral Dissertation Committee Member

Alex Dantzler, Chemical Engineering, Prof. Matteo Pasquali, Rice University	2022 – present
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Ph.D. Students Research Mentor

Seyed M. Sajadi, Materials Science and NanoEngineering, Rice University	2018 – 2021
Sandhya Susarla, Materials Science and NanoEngineering, Rice University	2018 – 2019

Undergraduate Research Assistants Supervised

(*indicates peer-reviewed paper authorship from work in the lab)

Daniel Stulski, Mechanical Engineering, Rice University	2021 – 2022
Chloe Kong, Materials Science and NanoEngineering, Rice University	2020 – 2021
Aasha Zinke*, Materials Science and NanoEngineering, Rice University	2020 – 2024
Yufei Cui*, Materials Science and NanoEngineering, Rice University, Finalist in 2020 Lemelson-MIT Student Prize.	2018 – 2021
Grant Wilkinson, Mechanical Engineering, Rice University	2018 – 2019

Sylvia Jung*, Materials Science and NanoEngineering, Rice University. Finalist in 2020 Lemelson-MIT Student Prize.	2018 – 2021
Qiyun Xu, Fiber Science, Cornell University	2017 – 2018
Vienna Chen, Fiber Science, Cornell University	2014 – 2016
Kelly Ho*, Biological & Environmental Engg., Cornell University	2012 – 2014
Jeffrey Huang, Material Science and Engineering, Cornell University	2012 – 2014
Everett Miller-Smith*, Mechanical Engineering, Tuskegee University	2011 – 2012
Jonathon E Malone*, Mechanical Engineering, Tuskegee University	2010 – 2011
Charles J Robertson*, Mechanical Engineering, Tuskegee University	2010 – 2011
James Holly, Mechanical Engineering, Tuskegee University	2010 – 2011

High School Interns Supervised

Raj Mhetar, The Academy of Science and Technology, The Woodlands, TX	Summer 2023
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ACADEMIC COMMUNITY SERVICE

Grant Proposal and Panel Reviews

Mitacs Elevate Research Program, Mitacs, 2025
National Science Foundation- SBIR/STTR Phase I 2024
Swiss National Science Foundation 2023

Referee for Journals

Nature, Nature Communications, Advanced Materials, Science Advances, Advanced Functional Materials, Advanced Science, Advanced Materials Technologies, Small, Advanced Intelligent Systems, Advanced Engineering Materials, Additive Manufacturing, 3D Printing and Additive Manufacturing, ACS Nano, ACS Applied Materials & Interfaces, ACS Applied Polymer Materials, ACS Biomaterials Science & Engineering, ACS Applied Nanomaterials, ACS Sustainable Chemistry & Engineering, Carbon, Cellulose, Composite Science and Engineering, Composites Part B, Chemical Engineering Journal, Macromolecules, Macromolecular Materials and Engineering, Polymer, Industrial & Engineering Chemistry Research, Journal of Composite Materials, Journal of Materials Science, Journal of Materials Engineering and Performance, Emergent Materials, MRS Communications, SN Applied Sciences, AATCC Journal of Research, Applied Composite Materials, Oxford Open Materials Science, Food Hydrocolloids, Journal of Vibration and Control, Journal of Stored Products Research, Progress in Organic Coatings.

Session Organizer at Scientific Meetings

Society of Engineering Science (SES) conference 2025, Atlanta, GA, USA
American Society of Composite (ASC) conference 2025, Dayton, OH, USA
American Society of Composite (ASC) conference 2024, San Diego, CA, USA

Chair at Sessions at Scientific Meetings

American Society of Composite (ASC) conference 2024, San Diego, CA, USA
NanoteC2023 conference, Brighton, UK
2022 Annual Meeting, Carbon Hub, Rice University

Guest Editor for Journals

Oxford Open Materials Science- Additive Manufacturing of Diverse Materials

Frontiers in Materials- Polymer Nanocomposites for Next-generation Energy Storage Device

Referee for Book Proposals

Royal Society of Chemistry

Poster and Presentation Judge

Science and Engineering Fair Houston 2025

NanoteC2023 conference, Brighton, UK

Content Consultant of Book

All about Nanotechnology by Racquel Foran for Grades 4-6

Professional Memberships

The Fiber Society	2023 –
Technical Association of the Pulp and Paper Industry (TAAPI)	2023 –
Carbon Hub, Rice University	2021 –
Member of Material Research Society (MRS)	2013 –
Member of American Chemical Society (ACS)	2012 –
Member of American Society of Mechanical Engineers (ASME)	2011 –
Member of Society for Advancement of Material and Process Engineering (SAMPE)	2011 –