

**Yanliang Zhang, Ph.D.**  
Collegiate Chair Professorship in Advanced Materials and Manufacturing  
Tenured Associate Professor  
Dept. of Aerospace and Mechanical Engineering  
University of Notre Dame  
Email: yzhang45@nd.edu, Phone: 574-6316669

**Prof. Yanliang Zhang’s involvement in the thermoelectric community**

**Yanliang Zhang** is Collegiate Chair Associate Professor of Engineering at the University of



Notre Dame. His research focuses on advanced thermoelectric materials and devices, high-throughput materials processing and characterization, additive manufacturing, scalable nanomanufacturing, advanced materials and devices for energy conversion and storage.

Prof. Zhang has been actively involved in thermoelectric research community for nearly 20 years in both academia and industry. Prof. Zhang has made significant contributions to thermoelectric field. He has created scalable nanomanufacturing and additive manufacturing methods to fabricate high performance, low cost and flexible thermoelectric materials and devices. He has invented a high-throughput combinatorial printing method to accelerate the discovery of new thermoelectric materials, and developed novel scanning probe methods for high-resolution mapping of thermoelectric properties. He has received the prestigious Career

Award from U.S. National Science Foundation, and Young Investigator Award from the International Thermoelectric Society. Prof. Zhang has successfully led multiple thermoelectric projects in collaboration with international partners from US, Asia and Europe, and successfully developed large scale thermoelectric systems for waste heat recovery and combined heat and power systems. Prof. Zhang has published seminal work in high impact journals including *Nature*, *Nature Materials*, *Energy & Environmental Science*, *Advanced Materials*, etc. Prof. Zhang has been an active participant of ICT and ITS in the past 15 years.

Prof. Zhang is very passionate about serving as a board member of the International Thermoelectric Society. He is dedicated to help ITS organize thermoelectric conferences and workshops and promote international cooperation among researchers from all over the globe.

**Education**

**Rensselaer Polytechnic Institute (RPI), Troy, NY, USA**

Ph.D.	Mechanical Engineering	08/2008-12/2011
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**Southeast University (SEU), Nanjing, China**

M.S.	Mechanical Engineering	08/2005-03/2008
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B.S.	Mechanical Engineering	09/2001-06/2005
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**Professional Appointments**

Collegiate Chair Associate Professor	University of Notre Dame	07/2023-Present
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Associate Professor	University of Notre Dame	07/2020-06/2023
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Assistant Professor	University of Notre Dame	07/2017-06/2020
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Assistant Professor	Boise State University	02/2013-06/2017
Senior Engineer	GMZ Energy	12/2011-01/2013
Research Assistant	Rensselaer Polytechnic Institute	08/2008-12/2011
Research Assistant	Southeast University	01/2005-05/2008

## Awards and Honors

### Personal

- NSF Career Award 2017
- 2020 International Thermoelectric Society Young Investigator Award 2020
- 2019 Emerging Investigator- Journal of Materials Chemistry A 2019
- Best paper award in thermoelectric session in MRS Fall 2010 2010
- IBM Fellowship Award 2008-2010
- Presidential Scholarship 2002 and 2004

### Representative Publications:

- [1] M. Zeng, Y. Du, Q. Jiang, N. Kempf, C. Wei, M. Bimrose, J. Chen, D. Kirsch, J. B. Martin, B. C. Wyatt, T. Hayashi, M. Saeidi-Javash, H. Sakaue, B. Anasori, L. Jin, M. D. McMurtrey, and **Y. Zhang\***, High-throughput printing of combinatorial materials from aerosols, **Nature**, 2023
- [2] M. Saeidi-Javash, K. Wang, M. Zeng, T. Luo, A. W. Dowling, and **Y. Zhang\***, Machine Learning-Assisted Ultrafast Flash Sintering of High-Performance and Flexible Silver-Selenide Thermoelectric Devices, **Energy & Environmental Science**, 2022
- [3] M. Zeng, D. Zavanelli, J. Chen, M. Saeidi-Javash, Y. Du, S. LeBlanc, G. J. Snyder, and **Y. Zhang\***, Printing thermoelectric inks toward next-generation energy and thermal devices, **Chemical Society Reviews**, 2022
- [4] M Zeng<sup>+</sup>, H Xie, M Saeidi-Javash<sup>@</sup>, ANM Tanvir<sup>@</sup>, Y Du<sup>@</sup>, J Chen, Mercuri G Kanatzidis, **Y Zhang\***, Scalable nanomanufacturing of chalcogenide inks: a case study on thermoelectric V–VI nanoplates, **Journal of Materials Chemistry A**, 2021
- [5] M. Zeng, W. Kuang, I. Khan, D. Huang, Y. Du, M. Saeidi-Javash, L. Zhang, Z. Cheng, A. J Hoffman, **Y. Zhang\***, Colloidal Nanosurfactants for 3D Conformal Printing of 2D van der Waals Materials, **Advanced Materials**, 2003081, 2020.
- [6] T. Varghese, C. Dun, N. Kempf, M. Saeidi-Javash, J. Richardson, D. Estrada, **Y. Zhang\***, Flexible Thermoelectric Devices of Ultrahigh Power Factor by Scalable Printing and Interface Engineering, **Advanced Functional Materials**, 1905796, 2019.
- [7] M. Saeidijavash, W. Kuang, C. Dun, and **Y. Zhang\***, Three-Dimensional Conformal Printing and Photonic Sintering of High-Performance Flexible Thermoelectric Films Using 2D Nanoplates, **Advanced Functional Materials**, 1901930, 2019
- [8] C. Han, G. Tan, T. Varghese, M. G. Kanatzidis, **Y. Zhang\***, High-Performance PbTe Thermoelectric Films by Scalable and Low-cost Printing, **ACS Energy Letters**, 3, 818–822, 2018.
- [9] **Y. Zhang\***, M. Cleary, X. Wang, N. Kempf, L. Schoensee, J. Yang, G. Joshi, L. Meda, High-Temperature and High-Power-Density Nanostructured Thermoelectric Generator for Automotive Waste Heat Recovery, **Energy Conversion and Management**, 105, 946, 2015.
- [10] R. J. Mehta, **Y. Zhang**, C. Karthik, B. Singh, R. W. Siegel, T. Borca-Tasciuc, G. Ramanath, “A new class of doped nanobulk high figure of merit thermoelectrics by scalable bottom-up assembly,” **Nature Materials**, 11, 233, 2012.