

PROMOTION RECOMMENDATION
The University of Michigan-Dearborn
College of Engineering and Computer Sciences

Ya Sha Yi, associate professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science, is recommended for promotion to professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science.

Academic Degrees:

M.A. Ph.D.	2004	Electronics and Optoelectronics, Massachusetts Institute of Technology Cambridge, Peking University, Beijing, China
M.Sc.	1997	Peking University, Beijing, China
B.Sc.	1995	Applied Science, Nanjing University, Nanjing, China

Professional Record:

2013 – present	Associate Professor, University of Michigan-Dearborn
2013 – present	Associate Professor/Faculty Affiliate, Energy institute, University of Michigan-Ann Arbor
2009 – present	Research Affiliate, Microsystems Technology Laboratory/Microphotonics Center, Massachusetts Institute of Technology, Cambridge, MA
2009 – 2013	Assistant Professor, CUNY Graduate Center, New York, NY
2005 – 2009	Senior Research Scientist, Central Research Laboratory, 3M, St. Paul. MN
2004 – 2005	Post-doctoral Associate, Materials Processing Center, Massachusetts Institute of Technology, Cambridge, MA
1999 – 2004	Graduate Research Assistant, Massachusetts Institute of Technology, Cambridge, MA
1997 - 1999	Staff Research Assistant, Material Science Division and Center for Nonlinear Studies, Los Alamos National Laboratory, Los Alamos, NM

Summary of Evaluation:

Teaching: Professor Yi is rated as excellent in teaching. He is currently supervising four Ph.D. students and co-chairing two others, and has supervised numerous capstone design projects since joining the university. Professor Yi has developed new doctoral level courses, ECE 657: Integrated Solid State Nano Electronic Devices, ECE 658: Quantum Electronics for Electrical Engineers and developed and taught numerous masters courses. He has done an excellent job of revising ECE 385 (Electrical Materials and Devices) and has created a separate version ECE 3851 that includes a lab section. This is one of the few undergraduate courses on this topic that offers a lab section. Professor Yi has consistently achieved high ratings on student evaluations, averaging 4.58 in course evaluation and 4.85 instructor evaluations, on a five-point scale.

Research: Professor Yi is rated as excellent in research. He has been very successful in gaining sponsored research from a variety of national and regional sponsors with over 1.5M in total

funding. He works on a variety of optical material and device projects sponsored by the National Science Foundation. Professor Yi has over 30 journal publications since joining the university, many of them in top journals, and a total of 85 journal papers overall. Several of his recent publications were with Ph.D. students he was supervising.

Recent and Significant Publications:

- C. Deng; X. Tan; L. Jiang; Y. Tu; M. Ye and Y. Yi, 'Efficient light trapping in silicon inclined nanohole arrays for photovoltaic applications,' *Optics Communications*, Accepted (2017).
- M. Ye and Y. Yi, 'Taper Resistant Subwavelength Grating Micro Lens,' *Optics Letters*, 42, 1031 (2017).
- Y. Yi, D. Wu, P. Birar, and Z. Yang, 'Ring resonator based optical hydrogen sensor,' *IEEE Sensors Journal*, 17, 2042 (2017).
- Y. Yi, P. Pignalosa, and D. Wu, 'Tunable and ultra-small graphene integrated silicon racetrack micro resonator,' *IEEE Journal of Selected Topics in Quantum Electronics*, VOL. 23, NO.1, 8200306 (2017).
- Y. Yi and D. Wu, 'Plasmonic hydrogen sensor based on integrated micro ring resonator,' *Optical Engineering*, 56, 121904 (2017).

Service: Professor Yi was rated as excellent in service. He is active in a variety of service roles within the department, including service on eleven committees at the department, colleges, and campus level. Notable roles include, chair of the Ph.D. committee, CECS Faculty Research Committee, and several faculty search committees. He also mentors junior faculty and post-docs. Professor Yi is active in professional societies and has served on numerous NSF, DoD, and DoE review panels.

External Reviewers:

Reviewer A: "Dr. Yi has made exceptional contributions to the scientific and engineering knowledge base of integrated optical and photonic devices which incorporate novel materials."

Reviewer B: "Based on my review of his papers, not only was he able to theoretically present solutions to the challenging problems in the specific area of nanoelectronics, but he was also able to support his findings with experimental results."

Reviewer C: "Also, I would like to mention his edited textbook "Integrated nanophotonic resonators: fundamentals, devices and applications" that introduces the physics and engineering readership to a variety of coupled and integrated nanophotonics cutting edge research. The latest development presented in that leading book will play a pivotal role in designing the future semiconductor chips."

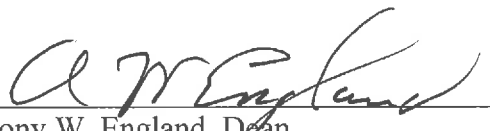
Reviewer D: "His research is well funded, which is highly admirable. He has edited and written chapters in books. He has served as a reviewer for a number of major journals. He is actively involved scientific publishing and conferences. He has given a total of 56 conference papers, which is an excellent record. He is a Senior Member of IEEE as well."

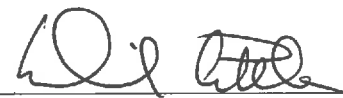
Reviewer E: "His high resolution medical imaging work has been featured in Photonics Spectra and Optical Society of America as the Research Breakthrough of the Year."

Reviewer F: "Prof. Yi's team has made extensive breakthroughs in integrated nano optoelectronic devices fields and has become a leading research group in this emerging field."

Summary of Recommendation:

Professor Yi is an excellent faculty member in all aspects of teaching, research, and service. We are pleased to recommend, with strong support of the College of Engineering and Computer Science Executive Committee, Ya Sha Yi for promotion to professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science.



Anthony W. England, Dean
College of Engineering and Computer Science

Daniel Little, Chancellor
University of Michigan-Dearborn

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