PROMOTION RECOMMENDATION
The University of Michigan
College of Engineering
Department of Materials Science and Engineering
Macromolecular Science and Engineering Program

Approved by the Regents May 21, 2015

Anish Tuteja, assistant professor of materials science and engineering, Department of Materials Science and Engineering, and assistant professor of macromolecular science and engineering, Macromolecular Science and Engineering Program, College of Engineering, is recommended for promotion to associate professor of materials science and engineering, with tenure, Department of Materials Science and Engineering, and associate professor of macromolecular science and engineering, without tenure, Macromolecular Science and Engineering Program, College of Engineering.

Academic Degrees:

Ph.D.	2006	Michigan State University, Chemical Engineering, Lansing, MI
B.E.	2001	Punjab University, Chemical Engineering, India

Professional Record:

2009 – present	Assistant Professor, Department of Materials Science and Engineering, University of Michigan
2009 – present	Assistant Professor, Macromolecular Science and Engineering Program, University of Michigan
2006 – 2009	Post-doctoral Research Associate, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA

Summary of Evaluation:
Teaching: Professor Tuteja's primary contributions to teaching are in the development and revamping of core undergraduate and graduate classes in Materials Science and Engineering. Specifically, in the last two years Professor Tuteja has worked to transform the design courses offered by the Department of Materials Science and Engineering. Overall all indicators point to the fact that Professor Tuteja is an effective teacher who is friendly and helpful in all his interactions with the students. The students, in their letters, also added that Professor Tuteja includes discussion of related publications, as well as results from his own research group, to his lectures and that helps them better understand and appreciate the course material. Comments from graduate students are consistently strong in their praise for Professor Tuteja as a mentor and teacher. Undergraduate students also spoke highly of the quality of his classroom instruction.

In addition to his duties as a course instructor, Professor Tuteja has served as an excellent educator and mentor to graduate students, postdoctoral associates, as well as undergraduate students in his research lab. He has supervised six Ph.D. students, six M.S. students, 21 undergraduate students, and four postdocs. One graduate student has graduated with a Ph.D. It is commendable to note that Professor Tuteja's first Ph.D. student to graduate published several high-impact research papers and won multiple awards, including the prestigious MRS Silver Graduate Student Award (2013), and his first postdoctoral associate recently started his own research group as an assistant professor at another university.

Research: Professor Tuteja has developed a successful research program that focuses on various aspects of surface science and engineering, such as the creation of surfaces with extreme wetting properties including superomniphobic and ice-repellent surfaces. At the University of Michigan, Professor Tuteja's early work successfully broadened the range of applications and innovations associated with specialty surfaces and enabled him to build a well-funded research program. In fact, Professor Tuteja's work has been highly impactful and resulted in 14 publications including papers in high-impact journals, such as *Advanced Materials*, *Angewandte Chemie*, *Nano Letters*, *JACS* and *Nature Communications* among others. In these papers, Professor Tuteja has revealed a particular virtue in selecting and demonstrating a wealth of exciting applications for numerous surface designs including membranes that can separate water from oil.

During his time at the University of Michigan, Professor Tuteja has established a strong track record of external funding of his research program. He has been very successful in raising research funding, nearing $3 million, from government agencies, companies and foundations, including his current funding from NSF (CAREER Award) and the Air Force Office of Scientific Research (AFOSR Young Investigator Award). It is to be noted that during his time as an assistant professor, Professor Tuteja has also built strong collaborations with researchers both within and outside the University of Michigan.

Recent and Significant Publications:

Arun K. Kota, Gibum Kwon and Anish Tuteja, "The design and applications of superomniphobic surfaces," *NPG Asia Materials* 2014, 6, e109.

Kevin Golovin, Duck Hyun Lee, Joseph M. Mabry, and Anish Tuteja, "Transparent, Flexible, Superomniphobic Surfaces with Ultra-Low Contact Angle Hysteresis," *Angewandte Chemie* International Edition 2013, 52, 13007.

Shuaijun Pan, Arun K. Kota, Joseph M. Mabry and Anish Tuteja, "Superomniphobic Surfaces for Effective Chemical Shielding," *Journal of the American Chemical Society*, 2013, 135, 578.

Sai P.R. Kobaku, Arun K. Kota, Duck Hyun Lee, Joseph M. Mabry, and Anish Tuteja "Patterned Superomniphobic-Superomniphilic Surfaces: Templates for Site-Selective Self-Assembly," *Angewandte Chemie International Edition*, 2012, 51, 10109.

Arun K. Kota, Gibum Kwon, Wonjae Choi, Joseph M. Mabry, and Anish Tuteja, "Hygro-responsive membranes for effective oil-water separation," *Nature Communications*, 2012, 3:1025, DOI: 10.1038/2027.

Arun K. Kota, Yongxin Li, Joseph M. Mabry, and Anish Tuteja, "Hierarchically structured superoleophobic surfaces with ultra-low contact angle hysteresis," *Advanced Materials*, 2012, 24, 5838.

Gibum Kwon, Arun K. Kota, Yongxin Li, Ameya Sohani, Joseph M. Mabry, and Anish Tuteja, "*On-demand* separation of oil-water mixtures," *Advanced Materials*, 2012, 24, 3666.

Service: Professor Tuteja has been active in committee work at the department and college levels. As a service to the greater scientific community, he reviewed manuscripts for central journals in his research field as well as proposals for important funding agencies. He also positively contributes to the climate of the University by actively recruiting and bringing underrepresented minority and international students into his research group. His significant technology transfer activities are commendable.

External Reviewers:

Reviewer A: "He has developed an internationally competitive program on surfaces with defined wetting characteristics…"

Reviewer B: "At Michigan Prof. Tuteja quickly established an independent research group, with a particular focus on materials with controlled super hydrophobicity. This is an area that is of considerable technical and commercial interest, and compliments well the interests of his colleagues on campus in Ann Arbor."

Reviewer C: "He has been successful in winning financial support for his research from peer-reviewed funding agencies and, additionally, the strong translational aspects of the work are attracting industry interest."

Reviewer D: "These are all very exciting areas of research of current interest. Prof. Tuteja has accomplished these above research activities by successful grant writing with support from many different funding agencies..."

Reviewer E: "He is polished, presents himself and his work well and (obviously) publishes in the right places."

Reviewer F: "Professor Tuteja's publication record reveals a commitment to quality that is rare in his peer group. In fact, considering that he has received his PhD only 8 years ago, I would not hesitate to say that his publication record is truly exceptional."

Reviewer G: "...Prof. Tuteja has become a well-respected scholar and rising star in the field of surface science."

Summary of Recommendation: Professor Tuteja has developed a productive and well-funded research program at the University of Michigan. He is a quality classroom teacher, excellent research and career mentor, and outstanding entrepreneur. His service and outreach contribution exceeds the typical expectation of an assistant professor. It is with the support of the College of Engineering Executive Committee that I recommend Anish Tuteja for promotion to associate professor of materials science and engineering, with tenure, Department of Materials Science and Engineering, and associate professor of macromolecular and science engineering, without tenure, Macromolecular Science and Engineering Program, College of Engineering.

David C. Munson, Jr.
Robert J. Vlasic Dean of Engineering
College of Engineering

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