

PROMOTION RECOMMENDATION
The University of Michigan
College of Literature, Science, and the Arts

Anne J. McNeil, associate professor of chemistry, with tenure, College of Literature, Science, and the Arts, and associate professor of macromolecular science and engineering, without tenure, College of Engineering, is recommended for promotion to professor of chemistry, with tenure, College of Literature, Science, and the Arts, and professor of macromolecular science and engineering, without tenure, College of Engineering.

Academic Degrees:

Ph.D.	2005	Cornell University
B.S.	1999	College of William and Mary

Professional Record:

2014 – present	Arthur F. Thurnau Professor
2013 – present	Associate Professor, Department of Chemistry and Department of Macromolecular Science and Engineering, University of Michigan
2007 – 2013	Assistant Professor, Department of Chemistry and Department of Macromolecular Science and Engineering, University of Michigan
2005 – 2007	Post-doctoral Fellow, Massachusetts Institute of Technology

Summary of Evaluations:

Teaching – Professor McNeil is notable for innovations in teaching that are being incorporated throughout the university curriculum. She is internationally known for having students work as teams to improve Wikipedia science content, and in the process engaging more deeply with the material. Professor McNeil is a Howard Hughes Medical Institute professor with substantial funding for introducing the concepts and practice of original research to students in introductory organic chemistry laboratories. Having completed two pilot semesters, this program will be rolled out to more than 1000 students in fall 2016. Professor McNeil's aim is to improve retention of students in STEM fields. She has also been active in extending the educational mission in other ways; e.g., she developed a chemistry-focused workshop for the Comprehensive Studies Program Summer Bridge Program, and pioneered an outreach program with Washtenaw Community College bringing these students to campus for summer research. Student evaluations of her courses have been outstanding. She is an award winning teacher who has received the college's 2013 Class of 1923 Memorial Teaching Award, was named a 2014 Arthur F. Thurnau Professor, and was awarded a 2014 Provost's Teaching Innovation Prize. Seven of her doctoral students have graduated, and she has mentored more than 28 undergraduate students in her laboratory.

Research – Professor McNeil has gained national and international recognition as an expert in the field of organic materials chemistry. Her publication record is strong with ground-breaking papers that have had a significant impact on the field of gelation chemistry. Despite the wide application of gels in drug delivery, environmental sensing, and other important areas, gelation remains a complex and poorly understood process. Professor McNeil's approach has been to increase understanding of key structural features in order to make it possible to rationally design

new small molecules capable of forming gels. Another research area has been conjugated polymers, which are widely investigated as components of solar cells and other technologies. Since helping elucidate a method for controlling polymerizations, Professor McNeil has focused on improved polymerization through catalyst design. Most recently, she has focused on the synthesis and application of gradient sequence conjugated copolymers (ones with a gradual change in composition from one chain end to the other). Prior to her work, there were no known gradient copolymers. Professor McNeil has demonstrated that gradient sequence copolymers could solve a long-standing problem in organic solar cells by providing thermally stable blends.

Recent and Significant Publications:

“Controlling morphology and enhancing thermal stability of polymer solar cells using all-conjugated gradient copolymers,” with J. A. Amonoo, et al., *Journal of Materials Chemistry A*, 2015, DOI: 10.1039/C5TA04752H.

“Solvent effect on surface ordering of poly-3-hexylthiophene (P3HT) thin films,” with M. Xiao, et al., *Langmuir*, 31, 2015, pp. 5050-5056.

“Tools for identifying new gelator scaffolds and solvents,” D.M. Zurcher and A. J. McNeil, *Journal of Organic Chemistry*, 80, 2015, pp. 2473-2478.

Service – Professor McNeil has been an outstanding citizen at Michigan and in the wider community of chemical science professionals and STEM educators. She has made substantial contributions to the Department of Chemistry in graduate student recruiting, graduate admissions, faculty recruiting, and seminar coordination. For the last two years, Professor McNeil has chaired the Admissions Committee. She serves on both the Chemistry and the Macromolecular Science and Engineering Executive Committees. An important contribution has been her role as faculty advisor in revitalizing a graduate student-run research symposium, helping them obtain internal and external funding. Beyond the department, Professor McNeil serves on the REBUILD Leadership Committee and the Provost’s TIP Selection Committee, among others. She is on the scientific advisory committee of the Beckman Foundation and the editorial advisory boards of the journals, *Macromolecules* and *ACS Macro Letters*. She is a sought-after contributor to panels, workshops, and seminars.

External Reviewers:

Reviewer (A)

“Her publication record continues to shine... ..Dr. McNeil is as passionate about research as about teaching and education. Her effort at retaining STEM students is remarkable. But, to me, standing out as a hallmark achieve[ment], is her directed efforts for Wikipedia editing.”

Reviewer (B)

“...[one] distinctive feature of Anne’s work is her ability to recognize important problems in materials science that are receiving limited attention by other groups. Her approach to addressing challenges in these areas is distinctive and original and exhibits an extraordinary depth of knowledge and insight. In view of her remarkable research accomplishments I was astonished (and impressed) to see her deep commitment and generously funded creative activities in education, curriculum development and mentoring!”

Reviewer (C)

“McNeil is an incredible role model...balancing work, family and teaching. She excels at everything she does. Promotion to full professor at this time is not only warranted, it is a good move to ensure that McNeil is not recruited away. ... strongly support this promotion.”

Reviewer (D)

“Every so often you encounter a rising academic super-star who achieves excellence across all of the metrics that we judge Professors by. Anne is one of these rare cases – an outstanding teacher – cutting-edge researcher – and truly committed Departmental/University citizen. Without a doubt, Anne would be promoted to Full Professor at my institution or at any top-20 institution within the US...”

Reviewer (E)

“I think as time goes on, her work will get even more recognition. I fully expect more of her publications to rise to the top set of publications in the field.”

Reviewer (F)

“...this is a most merited promotion; I support it enthusiastically and wholeheartedly. Prof. McNeil has clearly distinguished herself as a leading scholar, scientist, and educator.”

Reviewer (G)

“These initiatives demonstrate a restless and creative mind that is continuing to take her research in new directions. All indicators point to an expanding research portfolio with accelerating productivity. ...I am *very* impressed by her innovations, her scholarly understanding of modern directions in education, and her accomplishments. It is rare to see such genuine dedication and creativity... Our most valuable faculty members strive to excel at all that they do. Anne clearly follows that creed.”

Summary of Recommendation:

Professor McNeil truly excels at research, teaching, and service. The Executive Committees of the College of Literature, Science, and the Arts and the College of Engineering, and we recommend that Associate Professor Anne J. McNeil be promoted to the rank of professor of chemistry, with tenure, College of Literature, Science, and the Arts, and professor of macromolecular science and engineering, without tenure, College of Engineering, without tenure.



Andrew D. Martin, Dean
Professor of Political Science and Statistics
College of Literature, Science, and the Arts



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

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