

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

Kevin J. Kubarych, associate professor of chemistry, with tenure, and associate professor of biophysics, without tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of chemistry, with tenure, and professor of biophysics, without tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2003	University of Toronto
B.S.	1996	Brown University

Professional Record:

2015 – present	Associate Professor, Program in Biophysics, University of Michigan
2012 – present	Associate Professor, Department of Chemistry, University of Michigan
2005 – 2012	Assistant Professor, Department of Chemistry, University of Michigan
2003 – 2005	Post-doctoral Research Fellow, Ecole Polytechnique

Summary of Evaluations:

Teaching – Professor Kubarych interacts well with students and takes his didactic and non-didactic teaching responsibilities seriously. He has taught an undergraduate laboratory as well as several lecture courses. Student evaluations are typically excellent with few exceptions and are at or above the average for others teaching these same courses. Professor Kubarych has contributed to course development by revamping two 400-level courses to tailor the workload, in one course allowing students to better fit the class into their schedules and partially flipping the format in the other. The most notable aspect of Professor Kubarych's teaching is his work as a research mentor. He has had six undergraduate students work in his laboratory and many have published papers. His Ph.D. graduates have obtained excellent positions, including two who have tenure-track appointments at major universities and a third who has an excellent post-doctoral position.

Research – Professor Kubarych's field of research is physical chemistry with a specialization in spectroscopy. He has developed techniques that enable detailed study of the interaction of water with proteins in environments that mimic cellular environments providing insight into how proteins act in crowded environments. Professor Kubarych has also gained insight into how solvents and other local structures affect catalysts. This work will be useful for catalyst design which is at the heart of much chemistry research. The number of papers and the citation rate are typical for successful promotions in experimental physical chemistry which often have a lower publication and citation rate than some other areas of chemistry. Professor Kubarych has published three papers in the top chemistry journal and several papers in the top specialty journals for physical chemistry representing a good output and selection of journals.

Recent and Significant Publications:

- “Histidine orientation modulates the structure and dynamics of a *de novo* metalloenzyme active site,” with M. R. Ross, et al., *Journal of the American Chemical Society*, 137, 2015, pp. 10164-10176.
- “Multidimensional ultrafast snapshots of carbon dioxide photocatalyst dynamics,” with L. M. Kiefer and J. T. King, *Accounts of Chemical Research*, 48, 2015, pp. 1123-1130.
- “Crowding induced collective hydration of biological macromolecules over extended distances,” with J. T. King, et al., *Journal of the American Chemical Society*, 136 (2014) 188-194.
- “Ultrafast α -like relaxation of a fragile glass-forming liquid measured with 2D-IR spectroscopy,” with J. T. King and M. R. Ross, *Physical Review Letters*, 108, 2012, p. 157401.

Service – Professor Kubarych’s service record as strong. He has been an active member of several important committees, including a search committee in 2012, and he is currently serving on the departmental Executive Committee. To the wider community, Professor Kubarych has reviewed submissions for journals and funding agencies, and he has served on organizing committees for several important conferences.

External Reviewers:

Reviewer (A)

“Kubarych has had a major impact on developing novel ultrafast laser techniques to study condensed phase dynamics and applying them to answer critical chemical problems. ... His experiments are at the cutting edge of ultrafast technology and his results provide fundamentally new insights. Kubarych has clearly established himself as a world leader in this field. ... Based on the breadth and depth of his accomplishments in the field of coherent nonlinear infrared spectroscopy, his leadership role, and his clear upward slope, the promotion to the rank of professor is timely and fully warranted.”

Reviewer (B)

“...what I most appreciate in Kevin’s achievements is that they are the result of a scholarly well thought out strategy, where one develops tools to solve specific scientific problems. ... Kevin has achieved an undeniable international visibility. This is witnessed by the number of talks he was invited to give at the major international conferences. ...he has a huge potential for growth. His scientific vision is clear...and the means he has given himself to solve the problems are novel and promise to deliver more insight in the future.”

Reviewer (C)

“...in my view he is one of the bright stars in the ultrafast spectroscopy community. You should consider yourselves so very fortunate to have him as a colleague.”

Reviewer (D)

“Kubarych is currently one of the world leading experts in 2D-IR spectroscopy, with a broad range of applications to proteins and other biological systems, as well as materials chemistry. His many conference and seminar invitations are a clear sign of his leadership within the community.”

Reviewer (E)

“Kevin has put together a high quality and productive research program. ...[he] is working in a highly competitive area and is emerging as one of the leaders... He has attracted excellent graduate students, several of whom have gone on to faculty positions at excellent universities. ... Kevin has been highly productive since being promoted to tenure, so I expect that his research program and visibility will continue to grow.”

Reviewer (F)

“I think it is an absolutely clear case, and I strongly support the promotion. Kevin did and continues to make outstanding and very original contributions to the field of ultrafast spectroscopy in general, and coherent multidimensional IR spectroscopy in particular. ...the best is yet to come from his lab.”

Reviewer (G)

“Kevin Kubarych is an excellent experimentalist with a very good grasp of what he is measuring, how to measure it well, and how to interpret the data. He is original, creative, and grounded by a very solid intuitive understanding of physical chemistry. Kevin compares favorably to the top chemists in the field of roughly the same [generation]...”

Reviewer (H)

“Kevin serves on the program committee for the most important conference in our field of femtosecond spectroscopy and has given a good number of invited talks. I know he is highly regarded by leaders in the field. He gives polished and informative lectures.”

Summary of Recommendation:

Professor Kubarych is recognized as one of the leaders in his field. He is a caring teacher and mentor, and has a strong service record. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor Kevin J. Kubarych be promoted to the rank of professor of chemistry, with tenure, and professor of biophysics, without tenure, College of Literature, Science, and the Arts.



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

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