

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

Rose M. Cory, assistant professor of Earth and environmental sciences and assistant professor of environment, Program in the Environment, College of Literature, Science, and the Arts and School of Natural Resources and Environment, is recommended for promotion to associate professor of Earth and environmental sciences, with tenure, College of Literature, Science, and the Arts, and associate professor of environment, without tenure, Program in the Environment, College of Literature, Science, and the Arts and School of Natural Resources and Environment.

Academic Degrees:

Ph.D.	2006	University of Colorado, Boulder
M.S.	2001	Michigan Technological University
B.S.	1998	Michigan State University

Professional Record:

2014 – present	Assistant Professor, Program in the Environment, University of Michigan
2013 – present	Assistant Professor, Department of Earth and Environmental Sciences, University of Michigan
2009 – 2013	Assistant Professor, Department of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill
2008 – 2009	Director's Post-doctoral Fellow, Los Alamos National Laboratory
2006 – 2007	Post-doctoral Fellow, Department of Chemistry and Ecology and Department of Evolution and Biology, University of Minnesota, Twin Cities

Summary of Evaluation:

Teaching – Professor Cory is a dedicated and accomplished instructor who has contributed positively to the teaching mission in traditional and non-traditional ways. Her contributions to the undergraduate curricula of the Department of Earth and Environmental Sciences (EES) and the Program in the Environment (PitE) have been substantial. During the last three years at Michigan, Professor Cory has taught an introductory environmental geology course, which serves as a gateway to the EES major, and an upper-level course in aqueous geochemistry. She has supervised the research of six undergraduate students, three graduate students, and two post-doctoral fellows, and she has served on a large number of qualifying examination and dissertation committees. Professor Cory has been active through the PolarTREC program in the creation of K-12 training and curricular development, including the development of modules on environmental topics, including permafrost, carbon cycling, and climate change.

Research – Professor Cory is an organic matter geochemist and photochemist, who conducts field and laboratory experiments to investigate the carbon cycle. She is well known for her work on characterizing the reactivity and fate of dissolved organic matter in Arctic soils, lakes, and rivers. She is widely recognized for discovering the important role of photochemical oxidation in the breakdown of dissolved organic matter to atmospheric CO₂ in Arctic river waters. Professor Cory runs a productive, impactful, and well-funded research program. She has published 49 peer-reviewed articles, has received \$1.1 million in external funding, and was awarded a prestigious National Science Foundation Career Award (2014).

Recent and Significant Publications:

- “Controls on dissolved organic matter (DOM) degradation in a headwater stream: The influence of photochemical and hydrological conditions in determining light-limitation or substrate-limitation of photo-degradation,” with K.T. Harrold, et al., *Biogeosciences*, 12, 2015, pp. 6669-6685, doi:10.5194/bg-12-6669-2015.
- “Sunlight controls water column processing of carbon in arctic fresh waters,” with C. P. Ward, et al., *Science*, 345(925), 2014, doi:10.1126/science.1253119.
- “Surface exposure to sunlight stimulates CO₂ release from permafrost soil carbon in the Arctic,” with B.C. Crump, et al., *Proceedings of the National Academy of Sciences*, 110, 2013, pp. 3249-3434, doi:10.1073/pnas.1214104110.
- “Chemical composition of dissolved organic matter draining permafrost soils,” with C.P. Ward, *Geochimica et Cosmochimica Acta*, 167, 2015, pp. 63-79, doi:10.1016/j.gca.2015.07.001.

Service – Professor Cory has contributed significant service to EES and PitE through her thoughtful and dedicated participation on committees, including the EES Graduate Admissions Committee, the PitE Science Curriculum Committee, faculty search committees in each unit, and as a coordinator of the EES Smith Lecture series. She has made substantial contributions to the professional community through her service as a panelist on three grant review panels, as an associate editor for *Geophysical Research Letters* (GRL – one of the top journals in her field), and as a sought-after reviewer for journals and funding agencies. Professor Cory has also taken the time to make her research accessible to the public through outreach, and has participated in radio broadcast interviews and been highlighted in numerous (48+) magazines and newspapers.

External Reviewers:

Reviewer (A)

“I see this dossier as a ‘slam dunk’ for the promotion of Dr. Rose Cory to associate professor with tenure. She is delivering important research to bear on environmental problems, seems driven to continue to do so, and bring[s] great reputation to the University of Michigan along the way.”

Reviewer (B)

“Overall, this seems a very clear case for promotion and tenure, as Dr. Cory has contributed to an important research area in ways that have had impact on the research community, has built an independent research group and keep her laboratory well-funded, and has successfully mentored a number of students who have produced excellent, first-authored publications.”

Reviewer (C)

“She has already reached several major conclusions about the degradation of DOM...which are worthy of...awards from professional organizations such as the Geochemical Society or the European Association of Geochemistry. Her 2005 EST paper on the presence of oxidized and reduced quinones in DOM (Cory et al., 2005, *Environ. Sci. Technol.*) has already been cited over 500 times. This is a very impressive start of an academic career.”

Reviewer (D)

“Her role as a current Associate Editor of GRL...merit[s] special recognition, in that it is unusual I believe, for an assistant professor to be asked to do this. In my experience, her service on review panels, and the reviewing of a very large number of manuscripts and proposals is much more than most junior faculty. ... I find Dr. Cory’s record very, very strong.”

Reviewer (E)

"Cory's funding and publishing production are both very commendable, at levels commensurate with her best peers. Her record is better than mine at this stage of my career."

Reviewer (F)

"...her contributions are without exception of high quality and have made a clear scholarly impact. ... This is the strongest folder for promotion to the rank of associate professor that I have reviewed so far."

Reviewer (G)

"Rose Cory is definitely a leader among both...environmental scientists and engineers in her peer group and among researchers investigating the global carbon cycle. She has and continues to have new ideas and forge new approaches for understanding the reactivity of the major carbon-containing component of natural surface waters..."

Reviewer (H)

"I have written tenure and promotion assessments for many, many candidates, and Dr. Cory easily ranks among the best in terms of her productivity, grantsmanship, and scholarly impact. I am particularly impressed with the elegance, depth and breadth of her work involving DOM chemical characterization, its sources, and its fates via microbial, reactive oxygen, and photo-chemical processes."

Summary of Recommendation:

Professor Cory has made fundamental contributions to her field. She is a talented instructor, a dedicated mentor, and a conscientious and generous colleague. We, along with the Executive Committees of the College of Literature, Science, and the Arts and the School of Natural Resources and Environment, recommend that Assistant Professor Rose M. Cory be promoted to the rank of associate professor of Earth and environmental sciences, with tenure, College of Literature, Science, and the Arts, and associate professor of environment, without tenure, Program in the Environment, College of Literature, Science, and the Arts and School of Natural Resources and Environment.



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



Daniel G. Brown
Professor and Interim Dean
School of Natural Resources and Environment

May 2017