

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

Hashim M. Al-Hashimi, assistant professor of chemistry, College of Literature, Science, and the Arts, is recommended for promotion to associate professor of chemistry, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2000	Yale University
B.S.	1995	Imperial College

Professional Record:

2002 – present	Assistant Professor, Department of Chemistry, and Assistant Research Scientist, Biophysics Research Division, University of Michigan
2002	Senior Research Scientist, Memorial Sloan-Kettering Institute
2001	Research Associate, Memorial Sloan-Kettering Institute
2000	Postdoctoral Research Fellow, Memorial Sloan-Kettering Institute

Summary of Evaluation:

Teaching – Professor Al-Hashimi is an outstanding instructor and research mentor. Students give him superlative evaluations for introductory undergraduate chemistry as well as the upper level undergraduate laboratory courses. He has developed and is currently teaching a new freshman seminar course for biophysics undergraduate students. His lectures have been well-received in several team-taught graduate classes. Peer evaluations of his didactic teaching indicate that he is an engaging, dynamic, and creative lecturer. He is committed to mentoring graduate and undergraduate students in his research lab. He has been particularly successful at recruiting and mentoring underrepresented minority students in his research group.

Research – Professor Al-Hashimi has gained national and international recognition as an innovative researcher in the use of NMR spectroscopy to study the structure and function of RNA. He is a very creative thinker and enthusiastic mentor. Peers view him as one of the leaders in developing methods to analyze the structure and function of RNA. Two of his papers have been featured on the cover of journals, and his paper in *Science* is continuing to gather praise. His success has resulted in a firm base of financial support through research grants, including two grants, an RO1 from the National Institutes of Health and a National Science Foundation grant, on which he is the principle investigator.

Recent and Significant Publications:

“Visualizing spatially correlated dynamics that directs RNA conformational transitions,” with Q. Zhang, et al., *Nature*, in press.

“RNA dynamics by carbon relaxation and domain elongation,” with A. Hansen, *Journal of the American Chemical Society*, in press.

“Structural plasticity and Mg²⁺ binding properties of RNase P P4 from combined analysis of NMR residual dipolar couplings and motionally decoupled spin relaxation,” with M. Getz, et al., *RNA*, 13(2), 2007, pp. 251-66.

“Resolving complex motional modes that code for RNA adaptation,” with Q. Zhang, et al., *Science*, 311, 2006, p. 311.

Service – Professor Al-Hashimi has played important service roles in Chemistry by organizing a departmental lecture series as well as recruiting and mentoring students and underrepresented minorities. He played a significant role in planning the transformation of Biophysics from a research division to an enhanced program. In particular, he has been involved in developing the curriculum for the new Biophysics undergraduate major. Professor Al-Hashimi has carried out significant national service, including serving as an ad hoc member on several National Institutes of Health grant review panels and reviewing manuscripts and grants for a number of different journals and agencies. He has also edited a special issue of *Biopolymers* on ‘NMR of RNA dynamics.’

External Review:

Reviewer (A)

“Without doubt, Dr. Al-Hashimi would rank near the top of any list of scientists [of his generation] working in structural biology... I anticipate that his future research accomplishments will continue to be of high impact.”

Reviewer (B)

“Professor Al-Hashimi is clearly one of the brightest...investigators in the biological NMR community. He has an outstanding record of scientific accomplishments... His pioneering work has been published in numerous articles in top journals...”

Reviewer (C)

“...this is a strong and unambiguous case, and I support his promotion without reservation. ... In addition to the excellence of his science, Hashim [sic] is a dynamic and engaging speaker.”

Reviewer (D)

“It is hard not to be excited about Al-Hashimis’s [sic] prospects as a scientist. He has been scholarly and focused. ... I vividly remember his talk at the Keystone meeting in 2006 – it was brilliant! In addition, he supervises a plethora of students...demonstrating his commitment to educating future scientists.”

Reviewer (E)

“Dr. Al-Hashimi[’s] research program has progressed very well in the number and quality of his publications and he has strong funding for his research. ... He has also been invited to many national and international meetings as well as many outside seminars and thus has excellent visibility/recognition for someone as this point in his career.”

Reviewer (F)

"...Hashim is an outstanding scientist and teacher of the highest caliber, and without doubt one of the most promising scientist/educators [of his generation] whom I have met in my scientific career."

Reviewer (G)

"It is quite clear that his research program will provide a much deeper understanding in this area [the dynamics of biomolecular function] than is currently available and I can speak for many in the field when I say that we eagerly await his next accomplishments. Professor Al-Hashimi ranks very highly amongst his peers. ... Students that graduate from his laboratory are highly sought after (including by me!)."

Reviewer (H)

"He has gone on to apply this approach to several other systems, both independently and collaboratively, using both NMR relaxation and residual dipolar coupling data. ... His research is original and has a high probability for biological impact."

Reviewer (I)

"... Prof. Hashimi [sic] is already one of the most brilliant researchers in his field. ... The scientific rigor of Prof. Al-Hashimi positively motivates his PhD students."

Reviewer (J)

"I consider Dr. Al-Hashimi to be one of the brightest people [of his generation] working in the area of structural biology, and probably the foremost leader in the development of methods for determining the structure and dynamics of relatively larger RNAs. ... The work in his *Science* paper reflects great ingenuity... His most recent work... is now essential reading for my laboratory and is helping us to develop our own protocols..."

Summary of Recommendation:

Professor Al-Hashimi is an outstanding and creative researcher, a dedicated mentor, and an innovative instructor. The Executive Committee of the College of Literature, Science and the Arts and I recommend that Assistant Professor Hashimi M. Al-Hashimi be promoted to the rank of associate professor of chemistry, with tenure, in the College of Literature, Science and the Arts.



Terrence J. McDonald
Arthur F. Thurnau Professor,
Professor of History, and Dean
College of Literature, Science, and the Arts

May 2008