

## Curriculum vitae

### TATYANA E. POLENOVA, PH.D.

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#### EDUCATION

<b>B. S. (diploma with excellence)</b>	Chemistry Moscow State University, Moscow, Russia	1992
<b>M. A.</b>	Chemistry Columbia University, New York, NY, USA	1994
<b>M. Phil.</b>	Chemistry Columbia University, New York, NY, USA	1996
<b>Ph. D.</b>	Chemistry Columbia University New York, NY, USA	1997
<b>Postdoctoral</b>	Department of Chemistry Columbia University, New York, NY, USA	1997-1999

#### PROFESSIONAL HISTORY

<b>Assistant Professor</b>	Department of Chemistry and Biochemistry Hunter College, City University of New York,	1999-2003
<b>Member of CUNY Doctoral Faculties in Chemistry and Biochemistry</b>	City University of New York	1999-2003
<b>Assistant Professor</b>	Department of Chemistry and Biochemistry University of Delaware, Newark, DE, USA	2003-2006
<b>Associate Professor</b>	Department of Chemistry and Biochemistry University of Delaware, Newark, DE, USA	2006-2011
<b>Professor</b>	Department of Chemistry and Biochemistry University of Delaware, Newark, DE, USA	2011-present
<b>Director</b>	NIH-COBRE “Molecular Design of Advanced Biomaterials”	2014-present

#### RESEARCH INTERESTS

- Molecular biophysics and structural biology of virus assemblies HIV-1, SARS-CoV-2, Pf22
- Molecular biophysics and structural biology of microtubule- and actin-associated protein assemblies
- Structure and reactivity of vanadium sites in vanadium-containing proteins
- Development of magic angle spinning NMR methods for structure and dynamics of uniformly and differentially enriched protein assemblies

- Development of combined magic angle spinning NMR and computational DFT methods for direct detection of diamagnetic quadrupolar vanadium sites in proteins, and for detailed analysis of their geometric and electronic structure, and chemical reactivity
- Development of combined  $^{19}\text{F}$  magic angle spinning NMR,  $^{19}\text{F}$  dynamic nuclear polarization magic angle spinning NMR, and computational DFT methods for analysis of geometric and electronic structure fluorine sites in proteins and protein assemblies

## HONORS AND ELECTED POSITIONS

Vice President of the International Society for Magnetic Resonance (ISMAR), 2022  
 Elected Fellow of the International Society for Magnetic Resonance (ISMAR), 2018  
 The 2020 Scientists' Choice Awards - Drug Discovery & Development Video of the Year, SLAS2020  
 Georgina Sweet Travel Award for a Female Keynote Speaker in Quantitative Biomedical Science, Australian Research Council, 2019  
 Sigma Xi Distinguished Lecturer, July 1, 2018 – June 30, 2020  
 Haitan Scholar (travel scholarship), Dalian University of Technology, Dalian, China, 2017-2020  
 EUROMAR, Board of Trustees, 2016 -  
 Stanford Distinguished Women in Science Speaker Series, Stanford University, April 2015  
 Visiting Professor, ENS and CNRS Lyon, Lyon, France, November – December 2014  
 2014 Regitze R. Vold Memorial Prize Lecture, University of California San Diego, 2014  
 The 55<sup>th</sup> Experimental Nuclear Magnetic Resonance (ENC) Conference, Chair, 2014  
 The 8<sup>th</sup> Alpine Conference on Solid-State NMR, Co-Organizer, 2013  
 Rocky Mountain Conference on Analytical Chemistry, Scientific Committee, 2012-  
 Erasmus Mundus Scholar, Visiting Professor at the University of Lille, Lille, France, 2012  
 Keynote Speaker, Ph.D. Student Retreat, Max-Delbruck-Center for Molecular Medicine (MDC) and the Leibniz-Institute for Molecular Pharmacology (FMP), Berlin, Germany, 2012  
 John van Geuns Lecturer, University of Amsterdam, Amsterdam, The Netherlands, 2010  
 Eastern Analytical Symposium, Governing Board, 2012-  
 Eastern Analytical Symposium, Board, 2009-2012  
 Experimental Nuclear Magnetic Resonance (ENC) Conference, Executive Committee, 2009-  
 Nominated for an Excellence in Undergraduate Academic Advising Award, 2009  
 Nominated for an Excellence in Teaching Award, 2005 and 2008  
 Young Investigator Presentation Award, the 5<sup>th</sup> International Symposium on Chemistry and Biological Chemistry of Vanadium, 2006  
 Varian Lecturer, University of Ottawa, 2005  
 NSF-CAREER award, 2003  
 Miller Award for Outstanding Teaching, Columbia University, 1994  
 Diploma with excellence of Moscow State University, 1992

## SERVICE TO THE GREATER SCIENTIFIC COMMUNITY

### Editorial boards, national and international advisory committees

January 2021- current	Journal of Magnetic Resonance, Editor-in-Chief
March 2019 - current	Journal of Structural Biology, Associate Developmental Editor
June 2018- current	Journal of Biomolecular NMR, Associate Editor
August 2020 – March 2022	Chemical Reviews, Guest Co-Editor of Special Thematic Issue “Biomolecular NMR Spectroscopy”
January 2019 – March 2022	UK High-Field Solid-State NMR Facility, International Advisory Board

June 2018 - current	New York Structural Biology Center, NIH-P41/RM1 grants, External Advisory Committee
May 2018 - current	National Ultrahigh Magnetic Field Laboratory, NIH-P41 grant, External Advisory Committee
July 2018 - January 2022	Scientific Reports, Editorial Board
January 2017-January 2021	Solid State Nuclear Magnetic Resonance, Trends Editor
January 2017- current	Journal of Magnetic Resonance, Editorial Board
January 2017- current	Journal of Structural Biology, Editorial Board
July 2016- June 2021	EUROMAR, Board of Trustees
September 2015 -	NMRFAM, External Advisory Committee
August 2015-December 2016	Solid-State Nuclear Magnetic Resonance, Editorial Board
April 2015- current	National Ultrahigh Field Magnetic Resonance Strategic Initiative, Co-Founder and Scientific Committee Member
January 2015	wwPDB Task Force for Validation of Biomolecular Structures Determined by NMR
September 2014- current	Journal of Biomolecular NMR, Editorial Advisory Board
September 2014 - 2016	External Advisory Board, pNMR European IST Partnership
September 2012- January 2017	Franklin Institute Committee of the Science and Arts
February 2008- current	Encyclopedia of Magnetic Resonance (eMagRes), Editorial Board
2010- 2015	ACS Committee on Publications (JBCCP), Member
September 2012- current	PeerJ, Editorial Board
September 2007-2014	Biochemical Journal, Editorial Advisory Panel
2009-2010	ACS Committee on Publications (JBCCP), Associate
<b>Study section and panel service</b>	
June 2020, September 2020	NIH BPNS Study Section, Co-Chair
September 2016 - May 2022	NIH BPNS Study Section, permanent member
February 2022	NSF panel, member
September 2016	NSF Division of Chemistry workshop on mid-scale instrumentation, panel member
March 2016	NSF MCB panel, member
December 2015-	National Ultrahigh Field Magnetic Resonance Strategic Initiative, Co-Founder and Scientific Committee member
November 2014	Academic Program Review, external reviewer, Department of Chemistry and Biochemistry, Miami University, Oxford, OH
September 2014	pNMR Project, mid-term review, external expert, University of Cambridge, Cambridge, United Kingdom
October 2009-	National High Magnetic Field Laboratory (NHMFL) User Committee
October 2013, February 2014	NIH BPNS Study Section, ad hoc member
May 2012	NIH ZRG1 BCMB-B Special Emphasis Panel, member
October 2007-June 2011	NIH BBM Study section, permanent member
March 2013, October 2011, October 2010	NSF panel on Chemistry of Life Processes, member
October 2010-October 2012	National High Magnetic Field Laboratory (NHMFL) User Committee Vice Chair
July 2010	NSF panel, member
April 2007	NSF panel, member
May 2006, October 2006, May 2007	NIH BBM Study Section, ad hoc member

February 2006	NIH MSFA Study Section, ad hoc member
November 2005	NIH BRP Special Emphasis Panel, member
November 2005	NSF Physical Chemistry Division panel, member
July 2004, November 2004, June 2005	NIH Fellowship Study Section, ad hoc member
April 2004	US Civilian Research and Development Foundation, reviewer
January 2003, December 2004, February 2011, December 2013	Netherlands Organization for Scientific Research (NWO), reviewer
February, June 2004	NIH-MBRS Study Section, ad hoc member
January, October 2002	NIH-MBRS Study Section, ad hoc member
July 2000	NSF Review Panel on Course, Curriculum, Laboratory Improvement Program, member

### Journal, grant proposal and book review

Reviewer for the National Science Foundation (2003- current)  
 Reviewer for the Israel-US Binational Science Foundation (2013- current)  
 Reviewer for American Chemical Society Petroleum Fund (2003- current)  
 Reviewer for Alzheimer's Foundation (2007- current)  
 Reviewer for Research Corporation (2004- current)  
 Reviewer for the European Research Council Executive Agency (2015- current)  
 Reviewer for the Natural Sciences and Engineering Research Council of Canada (2010- current)  
 Reviewer for the Italian Research and University Evaluation Agency (ANVUR) (2012- current)  
 Reviewer for the Swiss Science Foundation (2012- current)  
 Reviewer for the US Civilian Research and Development Foundation (2004, 2007)  
 Reviewer for Netherlands Organization for Scientific Research (NWO) (2003, 2004, 2011, 2013- current)  
 Reviewer for Wiley-VCH science textbook publisher (2004)  
 Reviewer for Garland Science/Bios scientific publishers (2004)  
 Reviewer for CRC/Taylor and Francis Group publishers (2006)  
 Reviewer for American Chemical Society Publications Division (2005- current)  
 Peer Reviewer for *Nature*, *Nature Communications*, *Nature Methods*, *Nature Structural Molecular Biology*, *Proceedings of the National Academy of Sciences USA*, *Accounts of Chemical Research*, *Analytical Chemistry*, *Angewandte Chemie*, *Journal of the American Chemical Society*, *Biochemistry*, *Applied Spectroscopy*, *Biophysical Journal*, *Canadian Journal of Chemistry*, *Chemistry- A European Journal*, *Chemistry of Materials*, *ChemPhysChem*, *Coordination Chemistry Reviews*, *Dalton Transactions*, *European Journal of the American Chemical Society*, *Journal of Inorganic Chemistry*, *Inorganic Chemistry*, *Journal of Biomolecular NMR*, *Journal of Chemical Physics*, *Journal of Inorganic Biochemistry*, *Journal of Molecular Biology*, *Journal of Physical Chemistry*, *Journal of Magnetic Resonance*, *Langmuir*, *Macromolecules*, *Magnetic Resonance in Chemistry*, *Molecular Pharmaceutics*, *PeerJ*, *PLoS One*, *PLoS Pathogens*, *Scientific Reports*, *Solid-State NMR Spectroscopy*, *Structure*

### Meeting organization

ISMAR 2023 (International Society of Magnetic Resonance), Program Committee Chair, Brisbane, Australia, scheduled for August 2023  
 TSRC Workshop on Emerging Methodologies for Paramagnetic NMR and Dynamic Nuclear Polarization in Biological and Inorganic Materials, Co-Organizer, Telluride, CO, scheduled for August 2023  
 The 57<sup>th</sup> Rocky Mountain Conference on Analytical Chemistry, Solid-State NMR Symposium, Scientific Committee Member and Session Chair, scheduled for July 2022  
 The 57<sup>th</sup> Rocky Mountain Conference on Analytical Chemistry, Solid-State NMR Symposium, Co-Chair, scheduled for July 2020 (canceled because of COVID-19)

ACS E. B. Wilson Award Symposium honoring Professor Angela M. Gronenborn, Chair and organizer, scheduled for March 30, 2020, University of Delaware, Newark, DE (postponed because of COVID-19)

The 6<sup>th</sup> US-Canada Winter School on Biomolecular Solid-State NMR, Co-Organizer, Stowe, VT, January 6, 2020

The 11<sup>th</sup> Alpine Conference on Magnetic Resonance, Chair, Scientific Committee, Chamonix-Mont Blanc, France, September 2019

The 2019 joint ISMAR/EUROMAR conference, Scientific Committee, Berlin, Germany, August 2019

TSRC Workshop on Emerging Methodologies for Paramagnetic NMR and Dynamic Nuclear Polarization in Biological and Inorganic Materials, Co-Organizer, Telluride, CO, August 2019

The 56<sup>th</sup> Rocky Mountain Conference on Analytical Chemistry, Solid-State NMR Symposium, Scientific Committee Member and Session Chair, July 2018

EUROMAR 2018, Scientific Committee Member and Session Chair, Nantes, France, July 2018

EMBO Workshop “Challenges for Magnetic Resonance in Life Sciences”, Co-Organizer, Principina Terra (Grosseto), Italy, May 2018

The 5<sup>th</sup> US-Canada Winter School on Biomolecular Solid-State NMR, Co-Organizer, Stowe, VT, January 7-12, 2018

TSRC Workshop on Emerging Methodologies for Paramagnetic NMR and Dynamic Nuclear Polarization in Biological and Inorganic Materials, Co-Organizer, Telluride, CO, August 2017

EUROMAR 2017, Session Chair, Warsaw, Poland, July 2017

Satellite Workshop on “Current Status and Perspective of Super-High Field NMRs Operated beyond GHz”, to 2016 ICMRBS, Co-Organizer, Kyoto, Japan, August 21, 2016

The 56<sup>th</sup> Rocky Mountain Conference on Analytical Chemistry, Solid-State NMR Symposium, Scientific Committee Member and Session Chair, July 2016

EUROMAR 2016, Session Chair, Aarhus, Denmark, July 2016

Workshop “Magnetic Resonance for Cellular and Structural Biology”, Co-Organizer, Principina Terra (Grosseto), Italy, June 2016

Workshop “Ultrahigh Field NMR and MRI: Science at a Crossroads”, Co-Chair and PI, National Institutes of Health, Bethesda, MD, November 12-13, 2015

The 55<sup>th</sup> Experimental Nuclear Magnetic Resonance (ENC) Conference, Chair, March 2014

The 55<sup>th</sup> Rocky Mountain Conference on Analytical Chemistry, Solid-State NMR Symposium, Scientific Committee Member and Session Chair, July 2014

The 51<sup>st</sup> Eastern Analytical Symposium, Chairperson, NMR Session and New Faculty in NMR Spectroscopy Awards Session, Somerset, NJ, November 2013

The 8<sup>th</sup> Alpine Conference on Solid-State NMR, Co-Organizer, Chamonix, France, September, 2013

The 51<sup>st</sup> Eastern Analytical Symposium, Chairperson, NMR Session, Somerset, NJ, November 2012

14<sup>th</sup> Central and Eastern European NMR Symposium and Bruker Users Meeting, Session Chair, Golden Sands, Bulgaria, September 2012

The 53<sup>rd</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Executive Committee Member and Session Chair, Miami, FL, April 2012

The 50<sup>th</sup> Eastern Analytical Symposium, Chairperson, NMR Session, Somerset, NJ, November 2011

The 7<sup>th</sup> Alpine Conference on Solid-State Nuclear Magnetic Resonance, Session Chair, Chamonix-Mont Blanc, France, September 2011

4<sup>th</sup> Annual COBRE Symposium, University of Delaware, Newark, DE, May 2011

The 52<sup>nd</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Executive Committee Member and Session Chair, Asilomar, Pacific Grove, CA, April 2011

The 49<sup>th</sup> Eastern Analytical Symposium, Chairperson, NMR Session, Somerset, NJ, November 2010

The 51<sup>st</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Executive Committee Member and session Chair, Daytona Beach, FL, March 2010

The 48<sup>th</sup> Eastern Analytical Symposium, Chairperson, NMR Session, Somerset, NJ, November 2009

The 50<sup>th</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Executive Committee Member and session Chair, Asilomar, CA, April 2009

The 238<sup>th</sup> National ACS Meeting, Chairperson, Coordination Chemistry: Characterization and Applications session, Washington, DC, August 2009

The 47<sup>th</sup> Eastern Analytical Symposium, Chairperson, NMR Session, Somerset, NJ, November 2008

2<sup>nd</sup> Annual COBRE Symposium, University of Delaware, Newark, DE, October 2008

The 46<sup>th</sup> Eastern Analytical Symposium, Chairperson, NMR Session, Somerset, NJ, November 2007

International Symposium “NMR of Metals in Biological Systems and Materials”, Organizer, Newark, DE, June 8-10, 2007

The 223<sup>rd</sup> National ACS Meeting, Chairperson, Coordination Chemistry: Characterization and Applications session, Chicago, IL, March 2007

The 45<sup>th</sup> Eastern Analytical Symposium, Chairperson, NMR Session, Somerset, NJ, November 2006

The 44<sup>rd</sup> Eastern Analytical Symposium, Chairperson, EAS Award Session for Achievements in Magnetic Resonance, Honoring Ann McDermott, Somerset, NJ, November 2005

NIH-RCMI symposium “Connecting to the Nanoworld”, Co-Organizer, Hunter College, New York, 2001

Symposium “NMR and Structural Biology: Preparing for the New Millenium”, Co-Organizer, City University of New York- New York Structural Biology Center, 2000

## PUBLISHED SCHOLARLY WORK

### I. EDITED BOOKS

1. Ann E. McDermott and Tatyana Polenova (Editors) (2010) *Solid-State NMR Studies of Biopolymers*. John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom. ISBN: 978-0-470-72122-3

### II. INVITED BOOK CHAPTERS

2. Caitlin M. Quinn, Mingzhang Wang, Tatyana Polenova (2018) NMR of Macromolecular Assemblies and Machines at 1 GHz and Beyond: New Transformative Opportunities for Molecular Structural Biology, *Protein NMR: Methods and Protocols, Methods in Molecular Biology*, Vol. 1688, Chapter 1, pp 1 – 35, DOI: 10.1007/978-1-4939-7386-6\_1.
3. Melissa R. Palmer, Riju A. Gupta, Marci E. Richard, Christopher L. Suiter, Tatyana Polenova, Jeffrey C. Hoch and David Rovnyak (2015) Chapter 6: Application of Non-Uniform Sampling for Sensitivity Enhancement of Small-molecule Heteronuclear Correlation NMR Spectra, in *Modern NMR Approaches to the Structure Elucidation of Natural Products: Volume 1: Instrumentation and Software*, 1, pp. 93-118 DOI: 10.1039/9781849735186-00093
4. Tatyana Polenova, Andrew S. Lipton, Paul D. Ellis (2012) Quadrupolar Metal Nuclides in Biological Materials. In “NMR of Quadrupolar Nuclei in Solid Materials”, Eds. Sharon Ashbrook, Stephen Wimperis, Roderick Wasylshen, John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom.
5. Shangjin Sun, Sivakumar Paramasivam, Si Yan, Yun Han, Christine Lightcap, John C. Williams, In-Ja L. Byeon, Jinwoo Ahn, Angela M. Gronenborn, Tatyana Polenova (2012) Solid-State NMR of Protein Complexes. In “Protein NMR Techniques”, “Methods in Molecular Biology” book series, Eds. Alexander Shekhtman and David Burz, Humana Press; 831, pp. 303-331.
6. Andrew S. Lipton, Tatyana Polenova, Paul D. Ellis (2010) Quadrupolar Metal Nuclides in Bioinorganic Chemistry: Solid-State NMR Studies. In “Solid-State NMR Studies of Biopolymers”, Eds. Ann E. McDermott and Tatyana Polenova, John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom. ISBN: 978-0-470-72122-3
7. Tatyana Polenova, Neela Pooransingh-Margolis, Rokus Renirie, Ron Wever, Dieter Rehder (2007) “<sup>51</sup>V Solid-State NMR Spectroscopy of Vanadium Haloperoxidases and Bioinorganic Haloperoxidase Mimics”, in “Vanadium, The Versatile Metal”, Eds. K. Kustin, D. C. Crans, J. Costa Pessoa, ACS Publications, pp. 178-203.

8. Tatyana Polenova (2005) Resonance Assignments and Secondary Structure Determination in Uniformly and Differentially Enriched Proteins and Protein Reassemblies by Magic Angle Spinning NMR Spectroscopy. In “NMR Spectroscopy of Biological Solids”, Eds. A. Ramamoorthy, Marcel Dekker Inc. New York, pp. 57-84.

### III. INVITED REVIEWS, EDITORIALS, PERSPECTIVES AND FEATURE ARTICLES

9. Lucio Frydman and Tatyana Polenova (2021) JMR – A Joint Farewell/Incoming Editorial. *Journal of Magnetic Resonance*, DOI: <https://doi.org/10.1016/j.jmr.2021.106960>
10. Juan R. Perilla, Jodi Hadden-Perilla, Angela M. Gronenborn, and Tatyana Polenova (2021) Integrative Structural Biology of HIV-1 Capsid Protein Assemblies: Combining Experiment and Computation. *Current Opinion in Virology*, 48:57-64. DOI: 10.1016/j.coviro.2021.03.005.
11. Gal Porat-Dahlerbruch, Amir Goldbourn, Tatyana Polenova (2021) Virus Structures and Dynamics by Magic-Angle-Spinning NMR. *Annual Review in Virology*. 8(1):219-237. DOI: 10.1146/annurev-virology-011921-064653.
12. Jodi Kraus, Sucharita Sarkar, Caitlin M. Quinn, Tatyana Polenova (2021) Solid-State NMR Spectroscopy of Microcrystalline Proteins. *Annual Reports on NMR Spectroscopy*. 102: 81-151. DOI: <https://doi.org/10.1016/bs.arnmr.2020.10.002>.
13. Tatyana Polenova, Amir Goldbourn, Guido Pintacuda (2019) Editorial for Special Issue “Structure and Dynamics of Biomolecular Assemblies by Solid-State NMR. *Journal of Structural Biology*. 207 (2): 103. DOI: 10.1016/j.jsb.2019.05.005.
14. Rupal Gupta, Tatyana Polenova (2018, journal cover) Magic Angle Spinning NMR Spectroscopy Guided Atomistic Characterization of Structure and Dynamics in HIV-1 Protein Assemblies, *Current Opinion in Colloid and Interface Science*; 33, pp. 19-34.
15. Clare P. Grey, Tatyana Polenova, Shimon Vega (2018) Foreword: Special Issue in Honor of Alexander J. (Lex) Vega, *Solid State Nuclear Magnetic Resonance*, 92:12-13. DOI: 10.1016/j.ssnmr.2018.03.004.
16. Kristaps Jaudzems, Tatyana Polenova, Guido Pintacuda, Hartmut Oschkinat, Anne Lesage (2018) DNP NMR of Biomolecular Assemblies. *Journal of Structural Biology*; S1047-8477(18)30271-5. DOI: 10.1016/j.jsb.2018.09.011
17. Caitlin M. Quinn, Tatyana Polenova (2017) Structural Biology of Supramolecular Assemblies by Magic Angle Spinning NMR Spectroscopy, *Quarterly Reviews of Biophysics*. 50:e1. DOI: 10.1017/S0033583516000159
18. Tatyana Polenova, Thomas F. Budinger (2016) **Editorial:** Ultrahigh Field NMR and MRI: Science at a Crossroads, Report on a jointly-funded NSF, NIH and DOE workshop, held on November 12-13, 2015 in Bethesda, Maryland, USA. *Journal of Magnetic Resonance*. DOI: doi:10.1016/j.jmr.2016.01.008.
19. Tatyana Polenova, Rupal Gupta, Amir Goldbourn. (2015, journal cover) **Feature Article:** Magic Angle Spinning NMR Spectroscopy: A Versatile Technique for Structural and Dynamic Analysis of Solid-Phase Systems. *Analytical Chemistry*. 87(11):5458-69. DOI: 10.1021/ac504288u.
20. Caitlin Quinn, Christopher L. Suiter, Guangjin Hou, Huilan Zhang, Tatyana Polenova (2015) Magic Angle Spinning NMR of Viruses. *Progress in NMR Spectroscopy*; 86-87C: 21-40. DOI: 10.1016/j.pnmrs.2015.02.003.
21. Christopher L. Suiter, Caitlin M. Quinn, Manman Lu, Guangjin Hou, Huilan Zhang, Tatyana Polenova (2015) MAS NMR of HIV-1 protein assemblies. *Journal of Magnetic Resonance*, 253:10-22. DOI: 10.1016/j.jmr.2014.12.009.
22. Guangjin Hou, Christopher L. Suiter, Si Yan, Huilan Zhang, Tatyana Polenova (2015) Biomolecular Solid-State NMR Spectroscopy: Recent Methodological Developments and Applications to Structural and Dynamics Characterization of Protein Assemblies. *Annual Reports on NMR Spectroscopy*; 80, pp. 293-357.
23. Si Yan, Christopher L. Suiter, Guangjin Hou, Huilan Zhang, Tatyana Polenova (2013) Probing

- Structure and Dynamics of Protein Assemblies by Magic Angle Spinning NMR Spectroscopy. *Accounts of Chemical Research*; 46 (9), pp. 2047-2058.
24. Tatyana Polenova (2011) Protein NMR Spectroscopy: Spinning into Focus. *Nature Chemistry, News and Views Article*; 3 (10), pp. 759-760.
  25. Tatyana Polenova, Andrew S. Lipton, Paul D. Ellis (2011) Quadrupolar Metal Nuclides in Biological Materials. *Encyclopedia of Magnetic Resonance*.
  26. Andrew S. Lipton, Paul D. Ellis, Tatyana Polenova (2009) Quadrupolar Metal Nuclides in Bioinorganic Chemistry: Solid-State NMR Studies. *Encyclopedia of Magnetic Resonance*.
  27. Dieter Rehder, Tatyana Polenova, Michael Bühl (2007) Vanadium-51 NMR. In "Annual Reports in NMR Spectroscopy", 62, pp. 49-114.
  28. Ann McDermott and Tatyana Polenova (2007) Solid-State NMR Studies of Enzymes. *Current Opinion in Structural Biology*, 17 (5), pp. 617-622.

#### IV. PUBLICATIONS IN PEER REVIEWED JOURNALS

29. Roman Zadorozhnyi, Sucharita Sarkar, Caitlin M. Quinn, Kaneil K. Zadrozny, Barbie Ganser-Pornillos, Owen Pornillos, Angela M. Gronenborn, Tatyana Polenova (2021) Determination of Histidine Protonation States in Proteins by Fast Magic Angle Spinning NMR. *Frontiers in Molecular Biosciences*, 8: 767040., DOI: 10.3389/fmolb.2021.767040.
30. Caitlin M. Quinn, Roman Zadorozhnyi, Jochem Struppe, Angela M. Gronenborn, Tatyana Polenova (2021) Fast <sup>19</sup>F Magic-Angle Spinning Nuclear Magnetic Resonance for the Structural Characterization of Active Pharmaceutical Ingredients in Blockbuster Drugs. *Analytical Chemistry*, 93(38): 13029-13037., DOI: 10.1021/acs.analchem.1c02917.
31. Changmiao Guo, Matthew P. Fritz, Jochem Struppe, Sebastian Wegner, John Stringer, Ivan V, Sergeyev, Caitlin M. Quinn, Angela M. Gronenborn, Tatyana Polenova (2021) Fast <sup>19</sup>F Magic Angle Spinning NMR Crystallography for Structural Characterization of Fluorine-Containing Pharmaceutical Compounds. *Analytical Chemistry*, 93(23): 8210-8218., DOI: 10.1021/acs.analchem.1c00784
32. Ivan V. Sergeyev, Caitlin M. Quinn, Jochem Struppe, Angela Gronenborn, Tatyana Polenova (2021) Competing Transfer Pathways in Direct and Indirect Dynamic Nuclear Polarization MAS NMR Experiments on HIV-1 Capsid Assemblies: Implications for Sensitivity and Resolution. *Magnetic Resonance*, invited article for Special Issue honoring Prof. Robert Kaptein. DOI: <https://doi.org/10.5194/mr-2021-13>, 2021.
33. Lixin Liang, Yi Ji, Zhenchao Zhao, Caitlin M. Quinn, Xiuwen Han, Xinhe Bao, Tatyana Polenova, Guangjin Hou (2021) Accurate Heteronuclear Distance Measurements at All Magic-Angle Spinning Frequencies in Solid-State NMR Spectroscopy. *Chemical Science*, 12(34):11554-11564. DOI: 10.1039/d1sc03194e.
34. Manman Lu, Ryan W. Russell, Alexander J. Bryer, Caitlin M Quinn, Guangjin Hou, Huilan Zhang, Charles D. Schwieters, Juan R. Perilla, Angela M. Gronenborn, Tatyana Polenova (2020) Atomic-Resolution Structure of HIV-1 Capsid Tubes by Magic-Angle Spinning NMR. *Nature Structural & Molecular Biology*, 27(9):863-869. DOI: 10.1038/s41594-020-0489-2.
35. Chaoyi Xu, Douglas K. Fischer, Sanela Rankovic, Wen Li, Robert A. Dick, Brent Runge, Roman Zadorozhnyi, Jinwoo Ahn, Christopher Aiken, Tatyana Polenova, Alan N. Engelman, Zandrea Ambrose, Itay Rouso, Juan R. Perilla (2020) Permeability of the HIV-1 Capsid to Metabolites Modulates Viral DNA Synthesis. *PLoS Biol.*, 18(12): e3001015. DOI: 10.1371/journal.pbio.3001015.
36. Jodi Kraus, Rupal Gupta, Angela M Gronenborn, Tatyana Polenova (2020) Accurate Backbone <sup>13</sup>C and <sup>15</sup>N Chemical Shift Tensors in Galectin-3 Determined by MAS NMR and QM/MM: Details of Structure and Environment Matter. *ChemPhysChem*, 21 (13): 1436-1443. DOI: 10.1002/cphc.202000249.
37. Alia Hassan, Caitlin M. Quinn, Jochem Struppe, Ivan V. Sergeyev, Chunting Zhang, Changmiao Guo, Brent Runge, Theint Theint, Hanh H, Dao, Christopher P. Jaroniec, Mélanie Berbon, Alons



- Lends, Birgit Habenstein, Antoine Loquet, Rainer Kuemmerle, Barbara Perrone, Angela M. Gronenborn, Tatyana Polenova (2020, cover article) Sensitivity Boosts by the CPMAS CryoProbe for Challenging Biological Assemblies. *Journal of Magnetic Resonance*. Feb; 311:106680. DOI: 10.1016/j.jmr.2019.106680, Epub 2019 Dec 23
38. Jochem Struppe, Caitlin M. Quinn, Sucharita Sarkar, Angela M. Gronenborn, Tatyana Polenova (2020) Ultrafast  $^1\text{H}$  MAS NMR Crystallography for Natural Abundance Pharmaceutical Compounds. *Molecular Pharmaceutics*, 17(2):674-682. DOI: 10.1021/acs.molpharmaceut.9b01157.
39. Yi Ji, Lixin Liang, Changmiao Guo, Xinhe Bao, Tatyana Polenova, Guangjin Hou (2019) Zero-Quantum Homonuclear Recoupling Symmetry Sequences in Solid-State Fast MAS NMR Spectroscopy. *Acta Physico-Chimica Sinica*. 35(X), 0001-0009, DOI: 10.3866/PKU.WHXB201905029.
40. Manman Lu, Ivan V. Sergeyev, Caitlin M. Quinn, Jochem Struppe, Melanie Rosay, Angela M. Gronenborn, Tatyana Polenova (2019)  $^{19}\text{F}$  Dynamic Nuclear Polarization at Fast Magic Angle Spinning for NMR of HIV-1 Capsid Protein Assemblies. *Journal of the American Chemical Society*. 123(24):5048-5058, DOI: 10.1021/jacs.8b09216.
41. Matthew Fritz, Jodi Kraus, Caitlin M. Quinn, Glenn P. A. Yap, Jochem Struppe, Ivan V. Sergeyev, Angela M. Gronenborn, Tatyana Polenova (2019) Measurement of Accurate Interfluorine Distances in Crystalline Organic Solids: A High-Spinning MAS NMR Approach. *Journal of Physical Chemistry B*, 123(50):10680-10690, DOI: 10.1021/acs.jpccb.9b08919.
42. Changmiao Guo, John C. Williams, Tatyana Polenova (2019) Conformational Flexibility of p150<sup>Glued</sup>(1-191) Subunit of Dynactin Assembled with Microtubules. *Biophysical Journal*. 117(5):938-949. DOI: 10.1016/j.bpj.2019.07.036.
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#### KEYNOTE, PLENARY, AND SPECIAL LECTURES

1. 2022 Euromar, Utrecht, The Netherlands, July 2022.
2. "Fluorine MAS NMR and DNP of Molecules Small and Large: Spin it Fast!", symposium in honour of Professor Roderick E. Wasylshen, the Canadian Chemistry Conference and Exhibition, Calgary, Canada, June 13-17, 2022
3. "Fluorine MAS NMR and DNP of Molecules Small and Large: Spin it Fast!", NMRS-2022, IIT Gandhinagar, Palaj, Gandhinagar 382055, Gujarat, India, March 6-9, 2022 (virtual)
4. "Integrative Structural Biology of Protein Assemblies: Challenges and Opportunities for Magnetic Resonance", XII<sup>th</sup> International Conference NMR: A Tool for Biology, Institut Pasteur, Paris, France, May 2-4, 2022
5. "Atomic-Resolution Structural Biology of HIV-1 Assemblies", Virus-Cell Interactions: New Approaches and Technologies, The National Cancer Institute, HIV Dynamics and Replication Program, October 21, 2020.
6. "Structure and Dynamics of Protein Assemblies by MAS NMR", plenary lecture, Keystone Symposium "NMR in Biological Mechanisms", Hannover, Germany, June 22, 2020 (canceled because of COVID-19)
7. "Fluorine MAS NMR and DNP of Molecules Small and Large: Spin It Fast!", The 103<sup>rd</sup> Canadian Chemistry Conference and Exhibition, Symposium honoring Roderick Wasylshen, Winnipeg, Canada, May 24-28, 2020 (postponed because of COVID-19)
8. "Structure Determination by MAS NMR and Integrated Approaches: Methods and Applications to Protein Assemblies", The 6<sup>th</sup> US-Canada Winter School on Biomolecular Solid-State NMR, Stowe, VT, January 6, 2020
9. "I. Multidimensional Techniques for Resonance Assignments and Protein Structure Determination by MAS NMR. II. Nonuniform Sampling in MAS NMR", The 6<sup>th</sup> US-Canada Winter School on Biomolecular Solid-State NMR, Stowe, VT, January 6, 2020
10. "Structure and Dynamics of HIV-1 Assemblies at Atomic Resolution: An Integrated Approach", plenary lecture at the ANZMAG 2019, Pullman Bunker Bay Resort, Western Australia, November 28, 2019
11. "Dynamic Nuclear Polarization: Introduction", ANZMAG 2019 Educational Workshop on Biomolecular Solid-State NMR Spectroscopy, Pullman Bunker Bay Resort, Western Australia, November 25, 2019
12. "DNP-Enhanced MAS NMR: Applications to Biological Systems", ANZMAG 2019 Educational Workshop on Biomolecular Solid-State NMR Spectroscopy, Pullman Bunker Bay Resort, Western Australia, November 25, 2019
13. "Biomolecular Solid-State NMR: Introduction", ANZMAG 2019 Educational Workshop on Biomolecular Solid-State NMR Spectroscopy, Pullman Bunker Bay Resort, Western Australia, November 25, 2019

14. “Biomolecular Solid-State NMR: Applications”, ANZMAG 2019 Educational Workshop on Biomolecular Solid-State NMR Spectroscopy, Pullman Bunker Bay Resort, Western Australia, November 25, 2019
15. “High Speed MAS NMR of Proteins and Protein Assemblies”, ISMAR Conversations on Magnetic Resonance, online educational meeting, June 4, 2019: <https://tube.switch.ch/channels/fb103798>
16. “Biological Solid-State NMR”, tutorial lecture at the 60<sup>th</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Asilomar Conference Grounds, CA April 10, 2019
17. “Pushing the Boundaries for Sensitivity and Resolution in Solid-State NMR of Biological Assemblies”, Bruker Breakfast Symposium at the ENC, Monterey, CA, April 7, 2019
18. “Structure and Dynamics of HIV-1 Protein Assemblies: An Integrated Approach”, Dalian University of Technology, Dalian, China, April 3, 2019
19. “Structure and Dynamics of HIV-1 Protein Assemblies: Challenges and Opportunities for Magnetic Resonance”, Dalian Institute of Chemical Physics, Dalian, China, April 2, 2019
20. Two lectures on theory and applications of solid-state NMR, workshop on solid-state NMR, Dalian Institute of Chemical Physics, Dalian, China, April 1-2, 2019
21. “Peering Into Structure and Dynamics of Biological Assemblies with Atomic Resolution: An Integrated Approach”, Mini-symposium on Solid State NMR, ETH Zürich, Department of Chemistry and Applied Biosciences, Zürich, Switzerland, February 18-19, 2019
22. “The Critical Role of Natural Sciences and Education in Sustainable Society”, Sigma Xi Distinguished Lecture, West Virginia School of Osteopathic Medicine, Lewisburgh, WV, November 2, 2018
23. “The Critical Role of Natural Sciences and Education in Sustainable Society”, Sigma Xi Distinguished Lecture, Jackson River Governor’s School at Dabney S. Lancaster Community College, Clifton Forge, VA, November 2, 2018
24. “Understanding Structural Biology of HIV-1 Protein Assemblies by Integrating Experimental and Computational Approaches”, Sigma Xi Distinguished Lecture, West Virginia School of Osteopathic Medicine, Lewisburgh, WV, November 2, 2018
25. “Capturing and Quantifying Functional Dynamics in Viral Assemblies - Atomistic View from NMR, MD, and QM-MM”, Symposium honoring Clare P. Grey for EAS Award for Outstanding Achievements in Magnetic Resonance, Eastern Analytical Symposium, Princeton, NJ, November 13, 2018
26. The 62<sup>nd</sup> Annual Meeting of the Biophysical Society, symposium on “Protein Dynamics, Folding and Allostery II: Dynamics and Function”, San Francisco, CA, February 2018
27. ‘Multidimensional NMR in Structural Biology’ Course, Schorfheide (Germany), August 12-17, 2018
28. Career development discussion, Leibniz-Institute for Molecular Pharmacology (FMP), Berlin, Germany, May 24, 2018
29. The 5<sup>th</sup> US-Canada Winter School on Biomolecular Solid-State NMR, Stowe, VT, January 2018
30. NMRBox Workshop, Weizmann Institute of Science, Rehovot, Israel, November 27-30, 2017
31. XLVI National Congress on Magnetic Resonance, Fisciano (Salerno), plenary lecture, Italy, September 2017
32. The 10<sup>th</sup> Alpine Conference on Solid-State NMR, plenary lecture, Chamonix, France, September 2017
33. 2017 International Society of Magnetic Resonance (ISMAR) Conference, plenary lecture, Québec City, Canada, July 2017
34. Chicago Area NMR Discussion Group, keynote lecture, Milwaukee, WI, November 2016
35. The 42<sup>nd</sup> Naito Conference “In the Vanguard of Structural Biology: Revolutionizing Life Sciences”, Hokkaido, Japan, October 2016
36. The 30<sup>th</sup> Anniversary Symposium of the Protein Society, Baltimore, MD, July 16-19, 2016

37. NMR Meets Biology: An Interaction Week, Discussion meeting on NMR and future frontiers in structural biology issues, Kerala, India, January 2016
38. Lorentz Workshop “Proteins and Beyond”, University of Leiden, Leiden, The Netherlands, scheduled for October 2015
39. The 9<sup>th</sup> Alpine Conference on Solid-State NMR, plenary lecture, Chamonix, France, September 2015
40. 2015 European Conference on Magnetic Resonance (EUROMAR), plenary lecture, Prague, Czech Republic, July 2015
41. Stanford University Distinguished Women in Science Lecture, Stanford University, Palo Alto, California, April 2015
42. 2014 Regitze R. Vold Memorial Prize Lecture, University of California San Diego, San Diego, California, October 2014
43. International Conference on Magnetic Resonance in Biological Systems (ICMRBS), plenary lecture, Dallas, Texas, August 2014
44. Keynote Speaker, PhD Student Retreat, Max-Delbrück-Center for Molecular Medicine (MDC) and the Leibniz-Institute for Molecular Pharmacology (FMP), Berlin, Germany, 2012
45. John van Geuns Lecturer, University of Amsterdam, Amsterdam, The Netherlands, 2010
46. Varian Lecturer, University of Ottawa, 2005

#### INVITED LECTURES

47. “Fluorine MAS NMR and DNP of Molecules Small and Large: Spin it Fast!”, International Symposium on Small Molecule NMR Technology, Nanjing University, Nanjing, China, October 27-31, 2022 (virtual)
48. Alpine Conference on Magnetic Resonance in Solids, Chamonix-Mont-Blanc, France, September 4-8, 2022
49. XXIX ICMRBS, International Conference on Magnetic Resonance in Biological Systems, Boston, MA, August 21-25, 2022
50. 3 lectures in 2022 Summer School “Theory of NMR”, Schloss Windischleuba, Germany, March 27 – April 2, 2022
51. Experimental Nuclear Magnetic Resonance Conference (ENC), Orlando, FL, April 24-29, 2022
52. “Integrated Structural Biology of HIV-1 Protein Assemblies”, Brown University, November 10, 2021
53. “Magic Angle Spinning NMR and Integrated Structural Biology of HIV-1 Protein Assemblies”, University of Washington Seattle, November 3, 2021
54. “Integrated Structural Biology of HIV-1 Protein Assemblies”, Emerging Topics on Biomolecular Magnetic Resonance, ICMRBS virtual series, March 18, 2021.
55. “Integrated Structural Biology of HIV-1 Protein Assemblies: MAS NMR, DNP, MD Simulations, and Density Functional Theory”, Rutgers University, Institute For Quantitative Biomedicine, September 30, 2020
56. “Fluorine MAS NMR and DNP of Molecules Small and Large: Spin it Fast!”, Intercontinental NMR Conference on Methods and Applications (ICONS), August 26, 2020.
57. “DNP-Enhanced MAS NMR of Biological Assemblies”, SSNMR & DNP ZOOMinars 2020, May 27, 2020
58. “Peering Into Structure and Dynamics of Protein Assemblies with Atomic Resolution: An Integrated Approach”, XXIX ICMRBS, International Conference on Magnetic Resonance in Biological Systems, Boston, MA, August 23-28, 2020 (postponed because of COVID-19)
59. “Fluorine MAS NMR and DNP of Molecules Small and Large: Spin It Fast!”, EUROMAR 2020, The European Congress on Magnetic Resonance, Bilbao, Spain, July 5-9, 2020 (cancelled because of COVID-19)

60. "Peering Into Structure and Dynamics of Protein Assemblies with Atomic Resolution: An Integrated Approach", University of Chicago, Department of Chemistry, Chicago, IL, May 12, 2020 (cancelled because of COVID-19)
61. "Peering Into Structure and Dynamics of Protein Assemblies with Atomic Resolution: An Integrated Approach", University of Florida, The Center for Structural Biology, Gainesville, FL, April 20, 2020
62. "Peering Into Structure and Dynamics of Protein Assemblies with Atomic Resolution: An Integrated Approach", The National Cancer Institute, NIH, Frederick, MD, November 12, 2019
63. "Resolution in Low- and Not-So-Low- Temperature MAS NMR With and Without DNP: The Beauty is in The Eyes of the Beholder", The Telluride Science Workshop "Emerging Methodologies for Paramagnetic NMR and Dynamic Nuclear Polarization in Biological and Inorganic Materials", Telluride, CO, August 6, 2019
64. "Integrated Structural Biology of HIV-1 Assemblies", University of Warwick, Warwick, United Kingdom, March 28, 2019
65. Columbia University, Department of Chemistry and Biochemistry, New York, NY, November 29, 2018
66. Washington Area NMR Group (WANG), National Institutes of Health, Bethesda, MD, November 9, 2018
67. XXVIII International Conference on Magnetic Resonance in Biological Systems (ICMRBS), University College Dublin, Dublin, Ireland, August 2018
68. "Workshop on Challenges for Magnetic Resonance in Life Sciences", Grosseto, Italy, May 27 – May 31, 2018
69. The 59<sup>th</sup> Experimental Nuclear Magnetic Resonance Conference, Orlando, FL, April 30, 2018
70. The 2018 Practical Applications of NMR in Industry Conference (PANIC), San Diego, CA, March 4 – 8, 2018
71. Leibniz-Institute for Molecular Pharmacology (FMP), Berlin, Germany, January 17, 2018
72. Yale University, October 31, 2017
73. The 14<sup>th</sup> Annual North Eastern Structure Symposium (NESS), University of Connecticut, October 28, 2017
74. University of Massachusetts at Amherst, May 2, 2017
75. The Second Conference "Advanced Isotropic Labelling Methods for Integrated Structural Biology", Grenoble, France, scheduled for March 6-9, 2017
76. Brandeis University, Waltham, MA, scheduled for February 2017
77. MIT, Cambridge, MA, February 2017
78. DFG Discussion Meeting "EPR and ssNMR as Tools to Resolve the Mechanism of Molecular Machines", Tegernsee, Germany, December 2016
79. Bristol Meyer Squibb, New Brunswick, NJ, November 2016
80. University of Connecticut- UConn Health, Farmington, CT, November 10, 2016
81. City College of New York- CUNY, New York, NY, November 9, 2016
82. XXVII International Conference on Magnetic Resonance in Biological Systems (ICMRBS), Kyoto, Japan, August 2016
83. Satellite Workshop on "Current Status and Perspective of Super-High Field NMRs Operated beyond GHz", 2016 ICMRBS, Kyoto, Japan, August 21, 2016
84. "Virus Structure and Assembly", FASEB Science Research Conference, Steamboat Springs, CO, July 24, 2016
85. Structural Biology Related to HIV/AIDS, National Institutes of Health, Bethesda, MD, June 23, 2016

86. Structure and Dynamics of Biomolecules by MAS NMR, pNMR Satellite Event at the 2016 Chianti Workshop “Magnetic Resonance for Cellular Structural Biology”, Principina Terra, Grosseto, Italy, June 2016
87. Texas Tech University, Lubbock, TX, scheduled for March 2016
88. Drexel University, Philadelphia, PA, March 2016
89. The 2015 Pacificchem, Honolulu, Hawaii, December 2015
90. Lehigh University, Bethlehem, PA, October 2015
91. Wuhan Institute of Physics and Mathematics, Wuhan, China, August 2015
92. 2015 International Society of Magnetic Resonance (ISMAR) Conference, Shanghai, China, August 2015
93. Gordon Research Conference “Exploring the Frontiers of NMR, Computations and Complementary Biophysical Methods”, Lucca (Barga), Italy, June 2015
94. Symposium “Role of NMR in Researching Disease Pathways”, University of Nebraska-Lincoln, Lincoln, NE, March 2015
95. Symposium on Biomolecular Dynamics, Structure and NMR Spectroscopy, Institut de Biologie Structurale (IBS), Grenoble, France, December 2014
96. Cornell University, Department of Chemistry, Ithaca, NY, October 2014
97. University of Delaware, Department of Biological Sciences, Newark, DE, October 2014
98. New Developments in Experimental and Theoretical Techniques to Study Paramagnetic Inorganic Materials, the pNMR Conference and Workshop, University of Cambridge, Cambridge, United Kingdom, September 2014
99. Tel Aviv University, Tel Aviv, Israel, September 2014
100. Weizmann Institute of Science, Rehovot, Israel, September 2014
101. Bar Ilan University, Ramat Gan, Israel, September 2014
102. Bruker Pre-ICMRBS Symposium, Dallas, TX, August 2014
103. EMBO Practical Course on Solution and Solid-State NMR of Paramagnetic Molecules, Sesto Fiorentino, Italy, July 2014
104. 13<sup>th</sup> Chianti/INSTRUCT Workshop, Principina Terra, Grosseto, Italy, June 2014
105. University of California Irvine, April 2014
106. University of California Riverside, April 2014
107. Keystone Symposium “Frontiers of Structural Biology”, Snowbird, UT, March 2014
108. Bruker Pre-ENC Users’ Meeting, Boston, MA, March 2014
109. Symposium in Celebration of the 60<sup>th</sup> Birthday of Professor Timothy A. Cross, Florida State University, Tallahassee, FL, December 2013
110. University of Maryland, College Park, MD, October 2013
111. Workshop on Paramagnetic NMR, Chamonix, France, September 2013
112. Leibniz-Institute for Molecular Pharmacology (FMP), Berlin, Germany, September 2013
113. EUROMAR Conference, Hersonissos, Crete, Greece, July 2013
114. Gordon Research Conference “Computational Aspects of Biomolecular NMR”, Mr. Snow Resort, West Dover, VT (scheduled for June 2013)
115. The 96<sup>th</sup> Canadian Chemistry Conference, Solid-State NMR Symposium, Quebec City, Canada, May 2013
116. The 245<sup>th</sup> ACS Meeting, NMR/EM Symposium, New Orleans, LA, March 2013
117. Keystone Symposium “Frontiers of NMR in Biology”, Snowbird, UT, March 2013
118. New York Structural Biology Center, New York, NY, December 2012
119. Weill Medical College, Cornell University, New York, NY, December 2012
120. Rutgers University, New Brunswick, NJ, November 2012
121. Lille University, Lille, France (Visiting Professor, September-October 2012)
122. Estonian Magnet Week, Tallinn, Estonia, 2012

123. 14<sup>th</sup> Central and Eastern European NMR Symposium and Bruker Users Meeting, Golden Sounds, Bulgaria, 2012
124. Small Molecule NMR Conference (SMASH), Providence, RI, 2012
125. The 54<sup>th</sup> Rocky Mountain Conference on Analytical Chemistry, Copper Mountain, CO, 2012
126. Bruker Symposium Pre-RMC, Copper Mountain, CO, 2012
127. 12<sup>th</sup> Chianti Workshop on BioNMR, Montecatini Terme (Pistoia), Italy, June 2012
128. Bruker Pre-ENC Users' Meeting, Miami, FL, April 2012
129. Agilent Pre-ENC Users' Meeting, Miami, FL, April 2012
130. Penn State University, Hershey, PA, April 2012
131. Iowa State University, Ames, IA, March 2012
132. Thomas Jefferson University, Philadelphia, PA (guest lecturer in graduate course on Macromolecular Structure), March 2012
133. Ohio State University, Columbus, OH, February 2012
134. Zing Coordination Chemistry Conference, Cancun, Mexico (scheduled for December 2011)
135. Lomonosov Moscow State University of Fine Chemical Technology, Moscow, Russia, December 2011
136. The ACS MARM, College Park, MD, May 2011
137. The North Jersey ACS NMR Workshop, North Brunswick, NJ, March 2011
138. The National Institutes of Health, Bethesda, MD, March 2011
139. PacifiChem 2010 SSNMR Symposium, Honolulu, Hawaii (scheduled for 2010)
140. The 48<sup>th</sup> Eastern Analytical Symposium, Invited EAS Award Session for Achievements in Magnetic Resonance, Honoring Cecil Dybowski, Somerset, NJ, November 2010
141. Southeast/Southwest Regional ACS Meeting New Orleans, LA, November 2010
142. University of Nottingham, Nottingham, United Kingdom, November 2010
143. University of Amsterdam, Amsterdam, The Netherlands, November 2010
144. Texas A&M University, College Station, TX, September 2010
145. National Cancer Institute, Frederick, MD, July 2010
146. 3<sup>rd</sup> International Training School on Solid-State NMR, Leiden, The Netherlands, July 2010
147. University of Windsor, Windsor, Canada, May 2010
148. Experimental Nuclear Magnetic Resonance Conference (ENC), May 2010
149. The 47<sup>th</sup> Eastern Analytical Symposium, Invited EAS Award Session for Achievements in Magnetic Resonance, Honoring Lyndon Emsley, Somerset, NJ, November 2009
150. National High Magnetic Field Laboratory, Tallahassee, FL, October 2009
151. Michigan State University, East Lansing, MI, April 2009
152. Rutgers University, Newark, NJ, March 2009
153. Miami University of Ohio, Miami, OH, February 2009
154. New York University, New York, NY, October 2008
155. The Iberoamerican Chemistry Conference, Cusco, Peru, October 2008
156. Boston College, Boston, MA (2008)
157. XIX Annual Varian Workshop, Breckenridge, CO, 2008
158. Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, P. R. China, 2008
159. International Workshop on Solid-State NMR, Lanzhou University, Lanzhou, P.R. China, 2008
160. Central Regional ACS meeting, NMR symposium, 2008
161. University of Michigan at Ann Arbor, 2008
162. North Carolina State University, 2008
163. Winter School on Biomolecular Solid-State NMR, Stowe, VT, 2008
164. Moscow State University, Moscow, Russia, 2007

165. Conference on Undergraduate Research and Education in Nuclear Magnetic Resonance, Bucknell University, Lewisburg, PA, 2007
166. The 49<sup>th</sup> Rocky Mountain Conference on Analytical Chemistry, Breckenridge, CO, 2007
167. The 2<sup>nd</sup> Annual Solid-State NMR Workshop, Winnipeg, Canada, 2007
168. City College of the City University of New York, New York, NY, 2007
169. The 48<sup>th</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Daytona Beach, FL, 2007
170. University of Illinois at Urbana-Champaign, Urbana-Champaign, IL, 2007
171. Cornell University, Ithaca, NY, 2007
172. Hunter College of the City University of New York, New York, NY, 2006
173. 2006 South East Magnetic Resonance Conference (SEMRC), Gainesville, FL, 2006
174. Stevens Institute of Technology, Hoboken, NJ, 2006
175. West Virginia University, Morgantown, WV, 2006
176. The 5<sup>th</sup> International Vanadium Symposium, San Francisco, CA, 2006
177. Drexel University, Philadelphia, PA, 2006
178. University of Illinois at Chicago, Chicago, IL, 2006
179. University of Ottawa, Inaugural Varian Lecturer, Ottawa, Canada, 2006
180. The 43<sup>rd</sup> Eastern Analytical Symposium, Invited EAS Award Session for Achievements in Magnetic Resonance, Honoring Ann McDermott, Somerset, NJ, 2005
181. University of Maryland at College Park, College Park, MD, 2005
182. 2005 Gordon Research Conference on Magnetic Resonance, New London, CT, 2005
183. George Washington University, Washington, DC, 2005
184. 36th Great Lakes Regional ACS Meeting, Peoria, IL, 2004
185. Brandeis University, Waltham, MA, 2004
186. University of the Sciences in Philadelphia, Philadelphia, PA, 2004
187. XV Annual Varian/Chemagnetics Workshop, Fort Collins, CO, 2004
188. New York Structural Biology Center, New York, NY, 2004
189. International Chairmen of the European Research Councils' Chemistry Committees (CERC3) Workshop in Biocatalysis, Erlangen, Germany, 2004
190. National Institutes of Health, Bethesda, MD, 2004
191. Delaware Biotechnology Institute, Newark, DE, 2003
192. Department of Chemistry, New York University, New York, 2003
193. Department of Chemistry and Biochemistry, University of Delaware, Newark, DE, 2003
194. Department of Chemistry, Brookhaven National Laboratory, Upton, NY, 2001
195. Department of Chemistry and Biochemistry, Yale University, New Haven, CT, 2001
196. NJACS NMR Workshop, Woodbridge, NJ, 2001
197. Department of Chemistry, College of Staten Island, CUNY, Staten Island, NY, 2000
198. XXIV Latin American Congress in Chemistry, Lima, Peru, 2000
199. Department of Chemistry and Biochemistry, CCNY, CUNY, New York, NY, 1999
200. Department of Chemistry, Hunter College of CUNY, New York, NY, 1999
201. Department of Chemistry and Biochemistry, Yale University, New Haven, CT, 1998
202. Varian/Chemagnetics Workshop on Solid-State NMR, Estes Park, Colorado, 1998
203. Molecular Biophysics Seminar, Department of Biochemistry and Molecular Biophysics, Columbia University, 1997