# LEONARD JAMES BARBOUR

Distinguished Professor of Chemistry
Department of Chemistry and Polymer Science
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**Education**

- (2013) DSc, Stellenbosch University (SU),
  Promotor: C. Esterhuysen
  Thesis title: "*Mass transport phenomena in the crystalline solid state*"
- (1994) PhD, University of Cape Town (UCT),
  Advisors: L. R. Nassimbeni and M. R. Caira
  Thesis title: "*Clathration by Diol Hosts: Thermodynamics and Structure*"
- (1989) MSc, University of Cape Town
  Advisors: A. L. Rodgers and M. A. B. Pougnet
  Thesis title: "*Trace Elements in Relation to Urolithiasis*"
- (1987) BSc (HONS), University of Cape Town
- (1986) BSc, University of Cape Town

**Professional Experience**

| | |
|---|---|
| • 2021 – 2025 | Distinguished Professor, SU |
| • 2016 – 2020 | Distinguished Professor, SU |
| • 2017 – 2021 | SA Research Chair in Nanostructured Functional Materials (2nd renewal) |
| • 2012 – 2016 | SA Research Chair in Nanostructured Functional Materials (1st renewal) |
| • 2007 – 2011 | SA Research Chair in Nanostructured Functional Materials |
| • September 2005 – present | Professor, SU |
| • July 2003 – August 2005 | Associate Professor, SU |
| • June 1997- June 2003 | Research Assistant Professor, University of Missouri – Columbia (UMC) |
| • June 1994 – May 1997 | Postdoctoral Fellow, UMC |
| • 1993 - March 1994 | Research Officer, UCT |
| • 1992 | Lecturer, UCT |
| • 1987 to 1991 | Teaching Assistant, UCT |

**Awards & Honours**

- John Herschel Medal of the Royal Society of South Africa, 2020
- Chancellor's Award for Research, Stellenbosch University, 2017
- Distinguished Professor, Stellenbosch University, 2016-2020 and 2021-2025
- South African Chemical Institute Gold Medal, 2014
- Invited Visiting Professor, University of Strasbourg, May 2014
- Victor Pretorius Lectures, University of Pretoria, February 2014
- SASOL Innovator of the Year Award, 2013
- Fellow of the Royal Society of Chemistry (FRSC) (2013-)
- Fellow of the Royal Society of South Africa (FRSSAf) (2008-)
- NRF A2 Rating 2005-2009, 2010-2015 and 2016-2021
- National Science and Technology Forum Award for "Research and its Outputs Over the Past 5 Years or Less" (2007/2008)
- Rector's Award for Outstanding Research (2007, Stellenbosch University)
- American Institute of Chemists Foundation & the St. Louis Institute of Chemists Postdoctoral Award (1997)
- Foundation for Research Development Studentship (1990 & 1991)
- Foundation for Research Development Scholarship (1988 & 1989)

**Postdoctoral Fellow Supervision**

| | |
|---|---|
| • Annelies de Cuyper | 2021-current |
| • Phumile Sikiti | 2019-current |
| • Somananda Sanyal | 2018-2020 |
| • Dominic Castell | 2017-2018 |
| • Leigh Loots | 2017-current |
| • Arpan Hazra | 2016-2020 |
| • Himanshu Aggarwal | 2016 |
| • Varvara Nikolayenko | 2016-2018 |
| • Banele Vatsha | 2015-2017 |
| • Prem Lama | 2013-2017, Claude Leon Foundation Fellowship |
| • Agnieszka Janiak | 2012-2014, NRF Innovation Postdoctoral Fellowship |
| • Raj Kumar Das | 2012-2015 |
| • Simon Herbert | 2012-2013 |
| • Matteo Lusi | 2009-2012, Claude Leon Foundation Fellowship |
| • Vincent Smith | 2009-2013 |
| • Tia Jacobs | 2009-2010, 2012-2013 |
| • Prashant Bhatt | 2009-2012, Claude Leon Foundation Fellowship |
| • Subhadip Neogi | 2008-2009 |
| • Dinabandhu Das | 2007-2010 |
| • Charlotte Willans | 2006-2008, Leverhulme Trust (shared with Profs J. W. Steed and P. C. Junk) |
| • Greta Heydenrych | 2006, NRF Postdoctoral Fellowship |
| • Clive Oliver | 2005-2007, Claude Leon Foundation Fellowship |
| • Elise de Vries | 2005-2006, NRF Innovation Postdoctoral Fellowship |
| • Liliana Dobrzańska | 2004-2006, Claude Leon Foundation Fellowship |

**PhD Student Supervision**

- Shane de Beer 2021-current
- Banele Motloung 2020-current
- Xeuting Wei 2020- current
- Alan Eaby 2020- current
- Jan Costandius 2019-2021
- Lisa van Wyk 2019-2021
- Isabella Claassens 2018-2019
- Mpho Ledwaba 2016-2021
- Wesley Feldmann 2016-2020
- Dewald van Heerden 2015-2020
- Lukman Alimi 2013-2018
- Phumile Sikiti 2013-2018
- Emile Engel 2013-2016
- Himanshu Aggarwal 2012-2015
- Varvara Nikolayenko 2012-2015
- Marike du Plessis 2012-2019
- Charl Bezuidenhout 2011-2017
- Ilne Grobler, Upgraded to PhD 2010-2013
- Anneli Kleyn, Upgraded to PhD 2011-2012
- James Odendal 2010-2014
- Eustina Batisai 2010-2013
- Storm Potts 2009-2011
- Leigh Loots 2009-2012
- Tia Jacobs, Upgraded to PhD 2007-2009

**MSc Student Supervision**

- Ashleigh Ye 2020-current
- Xeuting Wei 2018-2019
- Alan Eaby 2018-2019, Graduated with Distinction
- Lisa van Wyk 2017-2018, Upgraded to PhD
- Jan Costandius 2017-2018, Upgraded to PhD
- Jeanice Basson 2016-2017, Graduated with Distinction
- Natasha Visser 2016-2017
- Dirkie Myburgh 2016-2017
- Isabella Claassens 2016-2017, Upgraded to PhD
- Kerry White 2016-2017, Graduated with Distinction
- Dawie de Villiers 2013-2014, Graduated with Distinction
- Dewald van Heerden 2012-2014, Graduated with Distinction
- Marike Du Plessis 2010-2011, Graduated with Distinction
- Ilne Grobler 2010-2011, Upgraded to PhD
- Charl Bezuidenhout 2009-2010, Graduated with Distinction
- Guillaume Greyling 2009-2010, Graduated with Distinction
- Anneli Kleyn 2009-2010, Upgraded to PhD
- Eustina Batisai 2008-2009, Graduated with Distinction
- Storm Potts 2007-2008, Graduated with Distinction
- Leigh Loots 2007-2008, Graduated with Distinction
- Charl Marais 2007-2008, Graduated with Distinction
- Tia Jacobs 2005-2006, Upgraded to PhD
- Gareth Lloyd 2004-2006, Graduated with Distinction

**Honours Project Supervision**

- Ashleigh Ye 2019
- Xeuting Wei 2017
- Lisa van Wyk 2016
- Jeanice Basson 2015
- Elaine Barnard 2013
- Dawie de Villiers 2012
- Dewald van Heerden 2011
- Marike Du Plessis 2009
- Ilne Grobler 2009
- Emile Engel 2008
- Anneli Kleyn 2008
- Leigh Loots 2006
- Storm Potts 2006
- Pieter Murray 2006
- Ilse Rootman 2005
- Tia Jacobs 2004
- Bertie Barnard 2004

**Active Collaborations**

- Prof. Mohamed Eddaoudi, King Abdullah University of Science and Technology, Saudi Arabia
- Prof. Michael Zaworotko, University of Limerick, Ireland
- Prof. Jerry Atwood, University of Missouri-Columbia, USA
- Prof. Wais Hosseini, University of Strasbourg, France
- Prof. Tomislav Friščić, McGill University, Canada
- Dr Consiglia Tedesco, University of Salerno, Italy
- Prof. K. Travis Holman, Georgetown University, U.S.A.
- Prof. Jonathan Steed, Durham University, U.K.
- Dr Katharina Edkins, School of Pharmacy, Queen's University Belfast, U.K.
- Prof. Catharine Esterhuysen, Department of Chemistry, Stellenbosch University
- Prof. Delia Haynes, Department of Chemistry, Stellenbosch University

**Professional Activities**

***Editorial activities***

- Associate Editor, *Crystal Growth and Design* (an American Chemical Society journal), 2020-
- Associate Editor, *New Journal of Chemistry* (a Royal Society of Chemistry journal), 2016-2019
- Associate Editor (with Jerry Atwood and George Gokel), *Comprehensive Supramolecular Chemistry*, 2nd Edition, 2017, Elsevier (a 9 volume major reference work)
- Volume Editor (*Supramolecular Chemistry – From Molecules to Nanomaterials*, Wiley VCH)
- Editorial Advisory Board, *Chemistry of Materials* (an American Chemical Society journal), 2021-
- Editorial Advisory Board, *ACS Sustainable Chemistry & Engineering* (American Chemical Society), 2018-
- Editorial Advisory Board, *Crystal Growth and Design* (American Chemical Society), 2014-2018
- Editorial Advisory Board, *CrystEngComm* (Royal Society of Chemistry), 2008-
- Editorial Board, *New Journal of Chemistry* (Royal Society of Chemistry), 2012-2015
- Guest Editor (with Jonathan Steed, Len MacGillivray and Agnieszka Szumna), 2017, *Supramolecular Chemistry* special issue.
- Guest Editor (with Mohamed Eddaoudi), 2015, *Chemical Communications*, $CO_2$ separation, capture and reuse: a web themed issue.
- Guest Editor (with Kari Rissanen and Len MacGillivray), 2014, *CrystEngComm*, Web-themed special issue on macrocyclic chemistry
- Co-editor: *Acta Crystallographica, Section C* (2008-2009)
- Co-editor: *Acta Crystallographica, Section E* (2005-2007)

***Memberships of professional societies***

- Fellow of the Royal Society of South Africa
- Fellow of the Royal Society of Chemistry
- Member of the American Chemical Society

- Member of the American Crystallographic Association
- Member of the South African Chemical Institute

***International Committees***

- Advisory Committee: 2014 Collaborative Conference on Crystal Growth
- International Scientific Committee (European Crystallographic School Workshop Series)
- International Advisory Board (ICCOSS Conference Series)
- International Advisory Board (ISIC Conference Series)

***Local Committees***

- Member of Subcommittee B, Stellenbosch University
- Central Analytical Facility, Stellenbosch University (2004-2012).
- Treasurer: South African Chemical Institute - Western Cape Region (2005-2009).
- Special Interest Group: Molecular Recognition and Inclusion, European Crystallographic Association (2004-current).
- South African Crystallographic Association (2005-2011).

***Reviewing***

- Have reviewed numerous manuscripts for:
  American Chemical Society: *Chemical Reviews, Journal of the American Chemical Society; Inorganic Chemistry; Journal of Organic Chemistry; Journal of Physical Chemistry; Crystal Growth & Design; Chemistry of Materials; Organometallics; Organic Letters;*
  Royal Society of Chemistry: *Chemical Communications; Analytical Methods; CrystEngComm; Dalton Transactions; New Journal of Chemistry, RSC Advances, Chemical Science;*
  Wiley: *Angewandte Chemie; Chemistry, a European Journal; European Journal of Inorganic Chemistry; European Journal of Organic Chemistry; ChemPlusChem; Advanced Materials; Journal of Pharmaceutical Sciences*
  Nature Publishing Group: *Nature; Nature Chemistry; Nature Communications; Nature Protocols, Nature Reviews Materials.*
  International Union of Crystallography: *Acta Crystallographica Section B; Acta Crystallographica Section C; Acta Crystallographica Section E;*
  Other publishers: *Science, Science Advances, Supramolecular Chemistry; Catalysis Today; Journal of Chemical Crystallography; Journal of Molecular Structure; Solid State Sciences; Structural Chemistry; Journal of Organometallic Chemistry; Coordination Chemistry Reviews; Inorganic Chemistry Communications; Journal of Coordination Chemistry; Journal of Supramolecular Chemistry; Proceedings of the National Academy of Sciences, USA; Australian Journal of Chemistry; South African Journal of Science;*
- Reviewed grant proposals for: National Research Foundation (RSA), Leverhulme Trust (UK), Engineering and Physical Sciences Research Council (UK), Royal Society (UK), American Chemical Society Petroleum Research Fund, Israel Science Foundation, National Science Foundation (USA), Royal Society of Edinburgh / Scottish Government Personal Research Fellowships co-funded by Marie Curie Actions, Croatian Science Foundation
- Reviews of numerous NRF rating applications
- Regular panel member: NRF National Equipment Programme and National Nanotechnology Equipment Programme
- Reviews of Royal Society of Chemistry Travel Grant applications
- Reviews of Postdoctoral Fellowship applications for the Claude Leon Foundation
- Examination of PhD and Masters theses: University of Cape Town, Indian Institute of Technology Kanpur, National University of Singapore, Stellenbosch University, Monash University (Australia), King Abdullah University of Science and Technology (Saudi Arabia), McGill University, University of Western Australia, University of Limerick, Pondicherry University
- External Examiner: Physical Chemistry, University of Namibia (2005-2009)
- Review of tenure applications: University of South Florida, McGill University, University of the Witwatersrand, University of Cincinnati, University of Iceland, Jawaharlal Nehru University

**Conference Organisation**

- Chair: Scientific Committee, 2nd Meeting on Porous Molecular Solids, Vietri sul Mare (Italy), 6-8 June, 2018.
- Chair: Organising Committee of ICCOSS-23, Stellenbosch, South Africa, 3-7 April, 2017.
- Chair: Scientific Committee, 1st Meeting on Porous Molecular Solids, Stellenbosch, 7-9 April, 2015.
- Chair: Organising Committee of INDABA 7, Skukuza, Kruger National Park, South Africa, 2-7 September, 2012.
- Chair: Organizing Committee of the 12th International Seminar on Inclusion Compounds, Stellenbosch, South Africa, 4-9 April, 2009.
- Chair: Organizing Committee of the 39th National Convention of the South African Chemical Society, Stellenbosch, South Africa, 30 November – 5 December, 2008.
- Steering Committee: 37th International Conference on Coordination Chemistry (2005/2006).
- Co-Chair: Organizing Committee of the Third International Workshop on Advanced Materials, Stellenbosch, South Africa, 5–8 September, 2005.

**Teaching Experience**

- Practical Crystallography for Graduate Students (2004, US)
- Chemistry Honours (Introduction to Crystallography, Supramolecular Chemistry 2003-current, US)
- Chemistry 244/242 (Inorganic Chemistry, 2003-2006, US)
- Chemistry 402 (Introduction to Crystallography, 2002, UMC)
- Practical Crystallography for Graduate Students (2000, UMC)
- Chemistry 230 (Physical Chemistry for the Biological Sciences, 1999, UMC)
- Chemistry 402 (Introduction to Crystallography, 1997, UMC)
- Chemistry 31 (Introductory Chemistry, 1995, UMC)
- Chemistry Honours (Thermoanalytical Methods,1993, UCT)
- Supervised Undergraduate Physical Chemistry Laboratories (1989-1993, UCT)

**Research Interests**

- Supramolecular Chemistry
- Crystal engineering
- Porous crystalline materials
- Polar order in crystals
- Anomalous thermal expansion in materials
- Nanotechnology
- Solid-gas reactions (for gas/vapor storage, sensing and separation)
- Solid state phase transitions (in particular, single-crystal to single-crystal transformations)
- Single-crystal and powder X-ray diffraction analysis
- Thermoanalytical methods
- Development of crystallographic software for structure visualization and manipulation
- Development of crystallographic software for educational purposes
- Development of novel experimental methods, including automation of data capture

**Publications**

**A. PEER-REVIEWED JOURNAL ARTICLES**

**Accepted**

225 N. Sun, C. Wang, B. Yu, H. Wang, L. J. Barbour and J. Jiang
Stimuli-Responsive Porous Molecular Crystal with Reversible Modulation of Porosity.
*ACS Appl. Mater. Interfaces*. **2021**.
DOI:

224 A. Półrolniczak, S. Sobczak, V. I. Nikolayenko, L. J. Barbour and A. Katrusiak
Solvent-controlled elongation and mechanochemical strain in a metal-organic framework.
*Dalton*. **2021**.
DOI: 10.1039/D1DT01937F

223 N. Kumar, S. Mukherjee, N. C. Harvey-Reid, A. A. Bezrukov, K. Tan, V. Martins, M. Vandichel, T. Pham, L. M. van Wyk, K. Oyekan, A. Kumar, K. A. Forrest, K. M. Patil, L. J. Barbour, B. Space, Y. Huang, P. E. Kruger and M. J. Zaworotko
Breaking the trade-off between selectivity and adsorption capacity for gas separation.
*Chem*. **2021**, *7*, 1.
DOI: 10.1016/j.chempr.2021.07.007

**2021**

**Published**

**2021**

222 M. Shivanna, K. Otake, B.-Q. Song, L. M. van Wyk, Q.-Y. Yang, N. Kumar, W. K. Feldmann, T. Pham, S. Suepaul, B. Space, L. J. Barbour, S. Kitagawa and M. J. Zaworotko
Benchmark acetylene binding affinity and separation through induced fit in a flexible hybrid ultramicroporous material.
*Angew. Chem. Int. Ed.* **2021**, 6I0, 20383.
DOI: 10.1002/anie.202106263

221 N. Bimbo, K. Zhang, H. Aggarwal, T. Mays, J. Jiang, L. J. Barbour and V. Ting
Hydrogen adsorption in metal-organic framework MIL-101(Cr) – Adsorbate densities and enthalpies from sorption, neutron scattering, in-situ X-ray diffraction, calorimetry, and molecular simulations.
*ACS Appl. Energy Mater.* **2021**, 4, 7839.
DOI: 10.1021/acsaem.1c01196

220 L. M. van Wyk, L. Loots and L. J. Barbour
Tuning Extreme Anisotropic Thermal Expansion in 1D Coordination Polymers through Metal Selection and Solid Solutions.
*Chem. Commun.* **2021**, 57, 7693.
DOI: 10.1039/d1cc01717a

219 D. P. van Heerden, V. J. Smith, H. Aggarwal and L. J. Barbour
High Pressure In Situ Single-Crystal X-Ray Diffraction Reveals Turnstile Linker Rotation Upon Room-Temperature Stepped Uptake of Alkanes.
*Angew. Chem. Int. Ed.* **2021**, *60*, 13430.
DOI: 10.1002/anie.202102327

218 L. M. van Wyk and L. J. Barbour
Colossal Trellis-Like Single-Crystal to Single Crystal Structural Transformations in Two 1D Coordination Polymers.
*Cryst. Growth. Des.* **2021**, 21, 3056.
DOI: 10.1021/acs.cgd.1c00240

217 N. Bimbo, J. P. Smith, H. Aggarwal, A. J. Physick, A. Pugsley, L. J. Barbour, V. P. Ting and T. J. Mays
Kinetics and enthalpies of methane adsorption in microporous materials AX-21, MIL-101 (Cr) and TE7.
*Chem. Eng. Res. Des.* **2021**, 169, 153.
DOI: 10.1016/j.cherd.2021.03.003

216 L. M. van Wyk, L. Loots and L. J. Barbour
Mechanochemical Control of Solvent Content in a 1D Coordination Polymer.
*J. Coord. Chem.* **2021**, 74, 190.
DOI: 10.1080/00958972.2021.1877688
Invited article for a special issue dedicated to Prof. Jerry Atwood

215 D. P. van Heerden and L. J. Barbour
Guest-occupiable space in the crystalline solid state: a simple rule-of-thumb for predicting occupancy.
*Chem. Soc. Rev.* **2021**, 50, 735.
DOI: 10.1039/D0CS01040E

**2020**

214 W. K. Feldmann, C. Esterhuysen and L. J. Barbour
Pressure-Gradient Sorption Calorimetry of Flexible Porous Materials: Implications for Intrinsic Thermal Management.
*ChemSusChem.* **2020**. *13*, 5220.
DOI: 10.1002/cssc.202001469

213 L. J. Barbour
X-Seed 4: updates to a program for small-molecule supramolecular crystallography.
*J. Appl. Cryst.* **2020**, *53*, 1141.
DOI: 10.1107/S1600576720007438

212 S. Sobczak, A. Półrolniczak, P. Ratajczyk, W. Cai, A. Gładysiak, V. I. Nikolayenko, D. C. Castell, L. J. Barbour, A. Katrusiak
Large negative linear compressibility of a porous molecular co-crystal.
*Chem. Commun.* **2020**, *56*, 4324.
DOI: 10.1039/D0CC00461H

211 M. du Plessis, V. I. Nikolayenko and L. J. Barbour
Record-setting selectivity for p-xylene by an intrinsically porous 0D metallocycle.
*J. Am. Chem. Soc.* **2020**, *142*, 4529.
DOI: 10.1021/jacs.9b11314

210 I. Brekalo, D. Deliz, L. J. Barbour, M. D. Ward, T. Friščić, K. T. Holman
Microporosity of a Guanidinium Organodisulfonate Framework.
*Angew. Chem. Int. Ed*. **2020**, *59*, 1997.
DOI: 10.1002/anie.201911861

209 W. K. Feldmann, K.-A. White, C. X. Bezuidenhout, V. J. Smith, C. Esterhuysen and L. J. Barbour
Direct Determination of Enthalpies of Sorption Using Pressure-Gradient Differential Scanning Calorimetry: $CO_2$ Sorption by CuHKUST.
*ChemSusChem*. **2020**, *13*, 102.
DOI: 10.1002/cssc.201902990

**2019**

208 A. Hazra, D. P. van Heerden, S. Sanyal, P. Lama, C. Esterhuysen and L. J. Barbour
$CO_2$-induced single-crystal to single-crystal transformations of an interpenetrated flexible MOF explained by *in situ* crystallographic analysis and molecular modeling.
*Chem. Sci*. **2019**, *10*, 10018.
DOI: 10.1039/C9SC04043A

207 P. Lama, A. Hazra and L. J. Barbour
Accordion and layer-sliding motion to produce anomalous thermal expansion behaviour in 2D-coordination polymers.
*Chem. Commun*. **2019**, *55*, 12048.
DOI: 10.1039/C9CC06634A

206 I. E. Claassens, L. J. Barbour and D. A. Haynes
A Multi-Stimulus Responsive Porous Coordination Polymer: Temperature-Mediated Control of Solid-state [2+2] Cycloaddition.
*J. Am. Chem. Soc.* **2019**, *141*, 11425.
DOI: 10.1021/jacs.9b05961

205 P. Sikiti, C. X. Bezuidenhout, D. P. van Heerden and L. J. Barbour
Direct in situ Crystallographic Visualization of a Dual Mechanism for Uptake of $CO_2$ Gas by a Flexible MOF.
*Inorg. Chem.* **2019**, *58,* 8257.
DOI: 10.1021/acs.inorgchem.9b00761

204 P. Sikiti, C. X. Bezuidenhout, D. P. van Heerden and L. J. Barbour
A new dynamic framework with direct *in situ* visualisation of breathing under $CO_2$ gas pressure.
*CrystEngComm* **2019**, *21*, 3415.
DOI: 10.1039/C9CE00418A

**2018**

203 L. J. Barbour
*EwaldSphere* – an interactive approach to teaching the Ewald sphere construction.
*J. Appl. Cryst.* **2018**, *51*, 1734.
DOI: 10.1107/S1600576718012876

202 I. E. Claassens, V. I. Nikolayenko, D. A. Haynes and L. J. Barbour
Solvent-mediated synthesis of cyclobutane isomers in a photoactive cadmium(II) porous coordination polymer.
*Angew. Chem. Int. Ed.* **2018**, *57*, 15563.
DOI: 10.1002/anie.201809050

201 H. Yang, F. Guo, P. Lama, W-Y. Gao, H. Wu, L. J. Barbour, W Zhou, J. Zhang, B. Aguila and S Ma
Visualizing Structural Transformation and Guest Binding in a Flexible Metal–Organic Framework under High Pressure and Room Temperature.
*ACS Cent. Sci.* **2018**, *4*, 1194.
DOI: 10.1021/acscentsci.8b00378

200 M. du Plessis, V. I. Nikolayenko and L. J. Barbour
Single-crystal to single-crystal uptake of volatile solids and associated chromatic response in a porous metallocycle.
*Inorg. Chem.* **2018**, *57*, 12331.
DOI: 10.1021/acs.inorgchem.8b02028

199 D. Das and L. J. Barbour
Uniaxial negative thermal expansion induced by moiety twisting in an organic crystal.
*CrystEngComm* **2018**, *20*, 5123.
DOI: 10.1039/C8CE01169A

198 V. I. Nikolayenko, D. C. Castell, D. P. van Heerden and L. J. Barbour
Guest-induced structural transformations in a porous halogen bonded framework.
*Angew. Chem. Int. Ed.* **2018**, *57*, 12086.
DOI: 10.1002/anie.201806399

197 V. I. Nikolayenko, L. M. van Wyk, O. Q. Munro and L. J. Barbour
Supramolecular Solvatochromism: Mechanistic Insight from Crystallography, Spectroscopy and Theory.
*Chem. Commun.* **2018**, *54*, 6975.
Cover article
DOI: 10.1039/C8CC02197J

196 L. O. Alimi, D. P. van Heerden, P. Lama, V. J. Smith and L. J. Barbour
Reversible Thermosalience of 4-Aminobenzonitrile.
*Chem. Commun.* **2018**, *54*, 6208.
DOI: 10.1039/C8CC03636E

195 M. Petryk, A. Janiak, L. J. Barbour and M. Kwit
Awkwardly-shaped dimers, capsules and tetramers: molecular and supramolecular motifs in C5-arylated chiral calixsalens.
*Eur. J. Org. Chem.* **2018**, 1916.
DOI: 10.1002/ejoc.201800314

194 Q.-Y. Yang, P. Lama, S. Sen, M. Lusi, K.-J. Chen, W.-Y. Gao, M. Shivanna, T. Pham, N. Hosono, S. Kusaka, J. J. Perry, S. Ma, B. Space, L. J. Barbour, S. Kitagawa and M. J. Zaworotko
Reversible switching between highly porous and non-porous phases of an interpenetrated diamondoid coordination network that exhibits gate-opening at methane storage pressures.
*Angew. Chem. Int. Ed.* **2018**, *57*, 5684.
DOI: 10.1002/anie.201800820

193 A. Janiak, C. Esterhuysen and L. J. Barbour
A thermo-responsive structural switch and colossal anisotropic thermal expansion in a chiral organic solid.
*Chem. Commun.* **2018**, *54*, 3727.
DOI: 10.1039/C8CC00952J

192 L. Alimi, P. Lama, V. J. Smith and L. J. Barbour
Hand-twistable Plastically Deformable Crystals of a Rigid Small Organic Molecule.
*Chem. Commun.* **2018**, *54*, 2994.
DOI: 10.1039/C8CC00775F

191 A. Janiak, M. Kwit and L. J. Barbour
An unexpected relationship between solvent inclusion and gas sorption properties of chiral calixsalen solids.
*Supramol. Chem.* **2018**, *30*, 479.
DOI: 10.1080/10610278.2018.1427865
Invited article for a special issue dedicated to Jerry Atwood in honour of his 75th birthday

190 P. Lama and L. J. Barbour
Distinctive Three-Step Hysteretic Sorption of Ethane with In-situ Crystallographic Visualization of the Pore Forms in a Soft Porous Crystal.
*J. Am. Chem. Soc.* **2018**, 140, 2145.
Cover article; ACS Editors' Choice; Featured as a Spotlight article: *J. Am. Chem. Soc.* **2018**, *140*, 1977.
DOI: 10.1021/jacs.7b10352

189 L. O. Alimi, P. Lama, V. J. Smith and L. J. Barbour
Large volumetric thermal expansion of a novel organic cocrystal over a wide temperature range.
*CrystEngComm* **2018**, *20*, 631.
DOI: 10.1039/C7CE01848G

**2017**

188 V. I. Nikolayenko, L. J. Barbour, A. Arauzo, J. Campo, J. M. Rawson and D. A. Haynes
Inclusion of a dithiadiazolyl radical in a seemingly non-porous solid.
*Chem. Commun.* **2017**, *53,* 11310.

187 V. I. Nikolayenko, A. Heyns and L. J. Barbour
Threading the needle: guest transport in a versatile 0D porous molecular crystal.
*Chem. Commun.* **2017**, *53,* 11306.

186 V. I. Nikolayenko, S. A. Herbert and L. J. Barbour
Reversible structural switching of a metal-organic framework by photoirradiation.
*Chem. Commun.* **2017**, *53,* 11142.

185 E. Macedi, A. Meli, F. De Riccardis, P. Rossi, V. J. Smith, L. J. Barbour, I. Izzo and C. Tedesco
Molecular recognition and solvatomorphism in a cyclic peptoid. Formation of a stable 1D porous framework.
*CrystEngComm* **2017**, *19*, 4704.

184 R. AbdulHalim, P. Bhatt, Y. Belmabkhout, A. Shkurenko, L. J. Barbour and M. Eddaoudi
A fine-tuned Metal-Organic Framework for Autonomous Indoor Moisture Control.
*J. Am. Chem. Soc.* **2017**, *139*, 10715.

183 E. R. Engel, A. Jouaiti, C. X. Bezuidenhout, M. W. Hosseini and L. J. Barbour
Activation-dependent breathing in a flexible metal-organic framework and the effects of repeated sorption/desorption cycling.
*Angew. Chem. Int. Ed.* **2017**, 56, 8874.

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**Invited Lectures**

60 Structural flexibility in the solid state
February 24, **2020**, McGill University, Montreal, Canada

59 Flexible porous materials
November 25, **2019**, Nankai University, Tianjin, China

58 Flexible porous materials
November 22, **2019**, University of Science and Technology Beijing, Beijing, China

57 Structural flexibility in the solid state
October 31, **2019**, Rhodes University, Grahamstown, South Africa

56 Porous materials: molecular-scale engineering – the 'hole' story
October 30, **2019**, Science Café, Grahamstown, South Africa

55 Developing complementary in situ methods for characterising porous crystalline materials
October 30, **2019**, Rhodes University, Grahamstown, South Africa

54 Understanding porosity in flexible metal-organic systems
April 8, **2019**, Zagreb University, Croatia

52 Structural flexibility in the solid state: implications for porosity
June 23, **2017**, Moscow State University, Moscow, Russia

51 Structural Flexibility in the Solid State
July 11, **2016**, Georgetown University, Washington DC, USA

50 Structural Flexibility in the Solid State
June 5, **2015**, York University Canada

49 Structure-Property Relationships of Solid-State Host-Guest Systems
June 3, **2015**, McGill University, Canada

48 Understanding Porosity in Flexible Metal-organic Systems
June 2, **2015**, University of Montreal, Canada

47 Flexible metal-organic frameworks - design, characterisation and properties
May 7, **2015**, University of Strasbourg, France

46 Porosity in flexible metal-organic frameworks
November 21, **2014**, Royal Society of Chemistry Roadshow in SA, University of Cape Town, South Africa

45 Structural flexibility in the solid state – implications for porous crystals
October 30, **2014**, University of Jyväskylä, Finland

44 Structural flexibility in the solid state – implications for porous crystals
October 29, **2014**, Helsinki University, Finland

43 Structural flexibility in the solid state
October 22, **2014**, Adam Mickiewicz University, Poland

42 Building a research career in South Africa
July 25, **2014**, Motivational Talk at the NRF Career Advancement Awards Launch, Lord Charles Hotel, Somerset West, South Africa

41 Why is 2014 the International Year of Crystallography?
July 3, **2014**, Motivational Talk, 16th Annual NSTF-BHP Billiton Awards Gala Dinner, Emperor's Palace, Kempton Park, Gauteng, South Africa

40 Structure-property relationships of solid-state host-guest systems
Jun 5, **2014**, University of Salerno, Italy

39 Understanding porosity in flexible metal-organic systems
May 23, **2014**, University of Lund, Sweden

38 Mass transport in the crystalline solid state
May 21, **2014**, KTH Stockholm, Sweden

37 Understanding porosity in flexible metal-organic systems
May 15, **2014**, University of Strasbourg, France

36 Structure-property relationships of solid-state host-guest systems
May 14, **2014**, University of Strasbourg, France

35 Structural flexibility in the solid state
May 6, **2014**, University of Strasbourg, France

34 Revealing the secret lives of crystals (Victor Pretorius Lecture)
February 28, **2014**, University of Pretoria, South Africa

33 Visualising structural dynamics in the crystalline solid state (Victor Pretorius Lecture)
February 27, **2014**, University of Pretoria, South Africa

32 Porosity in flexible metal-organic systems
August 14, **2013**, University of Bath, United Kingdom

31 Porosity in flexible metal-organic systems
July 18, **2013**, University of Missouri-Columbia, U.S.A.

30 Porosity in flexible metal-organic systems
May 30, **2013**, University of Salerno, Italy

29 What should chemists (and other scientists) be thinking about?
April 24, **2013**, University of Cape Town, South Africa (RSC Annual General Meeting – guest speaker)

28 Porosity in flexible metal-organic systems
April 27, **2012**, Chinese Academy of Science, Beijing, China

27 Structure-property relationships of some diyne-diol compounds
April 25, **2012**, East China University of Science and Technology, Shanghai, China

26 Porosity in flexible metal-organic systems
April 23, **2012**, University of Hong Kong, China

25 The secret life of crystals
September 22, **2011**, University of Cape Town, South Africa (Distinguished Alumni Lecture)

24 Porous molecular crystals: Discovery and design
December 3, **2010**, Georgetown University, Washington DC, U.S.A.

23 Structure-property relationships of molecular crystals
September 24, **2010**, University of Liverpool, United Kingdom

22 Structure-property relationships of molecular crystals
September 22, **2010**, Cambridge University, United Kingdom

21 Porous Crystals: Discovery and Design
September 14, **2007**, Monash University, Australia

20 Understanding Molecular Lego: Controlling the Construction of New Materials from the Bottom Up
February 14, **2007**, Royal Society of South Africa, Cape Town

19 Porous Crystals: Discovery and Design
November 30, **2006**, Polish Academy of Sciences, Warsaw, Poland

18 Porous Crystals: Discovery and Design
November 28, **2006**, University of Toruń, Poland

17 Porous Crystals: Discovery and Design
November 22, **2006**, University of York, United Kingdom

16 Porous Crystals: Discovery and Design
October 3, **2006**, University of Cape Town, Merck Lecture.

15 Porous Crystals: Discovery and Design
July 19, **2006**, Bruker Users' Meeting, Farm Inn, Pretoria, South Africa.

14 Porous Crystals: Discovery and Design
June 22, **2006**, Stratingh Institute and MSC, Groningen University, The Netherlands

13 Porous Crystals: Discovery and Design
December 12, **2005**, Department of Chemistry, University of Durham, United Kingdom

12 Crystal Engineering of Porous Solids
June 8, **2005**, Department of Chemistry, University of the Witwatersrand, South Africa

11 Crystal Engineering
June 2, **2005**, Stellenbosch University, Meeting of Young Chemists of SACI.

10 Gas Sorption in Organic Crystals.
November 15, **2004**, University of Durham, United Kingdom

9 Small Molecules, Large Assemblies.
November 20, **2003**, Inaugural lecture, Stellenbosch University, South Africa

8 Molecular Encapsulation in Nanotechnology.
May 29, **2002**, Stellenbosch University, South Africa

7 Molecular Encapsulation.
May 16, **2002**, University of Cape Town, South Africa

6 Nanometer-Scale Supramolecular Assemblies.
June 1, **2001**, King's College London, United Kingdom

5 Nanometer-Scale Supramolecular Systems.
May 23, **2001**, Cardiff University, United Kingdom

4 Nanoscale Supramolecular Systems.
May 17, **2001**, University of Leeds, United Kingdom

3 Nanoscale Supramolecular Systems.
April 18, **2001**, University of Cape Town, South Africa

2 Nanoscale Supramolecular Assemblies.
February 15, **2000**, Monash University, Australia

1 Small Molecule Crystallography and Large Supramolecular Systems.
February 18, **2000**, James Cook University, Townsville, Australia

**Conferences, Symposia & Workshops**

83 International School of Crystallography, 55$^{th}$ Course: Molecular Crystal Engineering, Online conference hosted at Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Italy, 31 May – 4 June, **2021**
Invited lecture: "Solid-state host-guest chemistry – the iconic Dianin's compound."

82 International School of Crystallography, 55th Course: Molecular Crystal Engineering, Online conference hosted at Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Italy, 31 May – 4 June, **2021**
Invited lecture: "Elucidating structural dynamics of flexible porous crystals."

81 Crystal Engineering and Emerging Materials Workshop of Ontario and Quebec (CEMWOQ 6.5)
Online conference hosted at Concordia University, Montreal, Canada, May 30-31, **2020**
Invited lecture: "Developing complementary *in situ* methods for characterising porous crystalline materials"

80 2020 Bruker/MIT Symposium
Massachusetts Institute of Technology, Cambridge MA, U.S.A., February 22, **2020**
Invited lecture: "Structural flexibility in the solid state – implications for porosity"

79 2020 Bruker/MIT Symposium – pre-symposium workshop
Massachusetts Institute of Technology, Cambridge MA, U.S.A., February 21, **2020**
"X-Seed – a software tool for supramolecular crystallography"

78 The Conference of Comprehensive Chemistry
Beijing Institute of Technology, Beijing, China, November 29, **2019**
Invited lecture: "Structure-property relationships in solid-state host-guest systems"

77 Visionary trends in molecular science III. A one-day symposium in honour of Nobel Laureate Sir Fraser Stoddart
Tianjin University, Tianjin, China, November 27, **2019**
Invited lecture: "Structural flexibility in the solid state"

76 A Nature Conference – Physical Properties of Metal-Organic Frameworks
Tianjin, China, November 19-21, **2019**
Keynote Lecture: "Developing complementary in situ methods for characterising porous crystalline materials"

75 24th International Conference on the Chemistry of the Organic Solid State
New York City, USA, June 16-21, **2019**
Keynote Lecture: "Structural flexibility in the solid state – implications for porous materials"

74 14th International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC-2009)
Lecce, Italy, June 2-6, **2019**
Invited Lecture: "Structural flexibility in the solid state – implications for porous materials"

73 26th Croatian Meeting of Chemists & Chemical Engineers (26HSKIK)
Šibenik, Croatia, April 9-12, **2019**
Plenary Lecture: "Structural flexibility in the solid state – implications for porous materials"

72 Crystal Engineering Laboratory Technology & Innovation Conference (CELTIC-2019)
Killarney, Ireland, March 29-31, **2019**
Plenary Lecture: "Structural flexibility in the solid state"

71 6th International Conference on Metal-Organic Frameworks (MOF 2018)
Auckland, New Zealand, December 9-13, **2018**
Keynote Lecture: "Structural flexibility in the solid state"

70 International Workshop on Porous Materials and their Applications
Pretoria, South Africa, September 13-14, **2018**
Invited Lecture – "Structural flexibility in the solid state: implications for porosity"

69 Crystal Engineering Gordon Research Conference - Progress in Crystal Engineering - Design, Properties, and Function
Newry ME, USA, June 24-29, **2018**
Invited Lecture – "Complementary Methods for the Characterization of Porous Crystalline Materials"

68 POMOS2 - 2nd Meeting on Porous Molecular Solids
Vietri sul Mare, Italy, 6-8 June **2018**
Keynote Lecture – "Structural flexibility in the solid state"

67 55th European High Pressure Research Group Meeting
Poznań, Poland, September 3 – 8, **2017.**
Invited Lecture – "Tools for studying the effects of gas pressure on porous materials in the solid state"
Session chair

66 SILQCOM 2017, 6th Latin American Symposium on Coordination and Organometallic Chemistry
Puerto Iguazú, Misiones, Argentina, August 6 – 11, **2017.**
Plenary Lecture – "Structural flexibility in the solid state: implications for porosity"
Session chair

65 4th European Crystallographic School
Warsaw, Poland, July 2 – 7, **2017.**
Invited Lecture – "X-Seed – a set of utility programs"

64 4th European Crystallographic School
Warsaw, Poland, July 2 – 7, **2017.**
Invited Lecture – "Supramolecular Chemistry and Crystallography"

63 16th International Symposium on inclusion Compounds
Kazan, Russia, June 26 – 30, **2017.**
Invited Lecture – "Structural flexibility in the solid state: implications for porosity"
Session chair

62 Workshop on $CO_2$ capture
University of the Western Cape, South Africa, June 5 – 7, **2017.**
Invited Lecture – "Structural flexibility in the solid state"

61 67th Annual Meeting of the American Crystallographic Association
New Orleans LA, USA, May 26 – 30, **2017.**
Invited Lecture – "Research and teaching tools: A SHELX/POV-Ray interface (X-Seed) and simulation of a diffractometer (SMART1k)."

60 67th Annual Meeting of the American Crystallographic Association
New Orleans LA, USA, May 26 – 30, **2017.**
Invited Lecture – "Structural flexibility in the solid state"

59 Telluride Science Center Workshop on Energy and Movement in Coherent Chemical Systems
Telluride CO, USA, July 4 – 8, **2016.**
Invited Lecture – "Structural flexibility in the solid state"

58 99th Canadian Chemistry Conference and Exhibition
Halifax, Canada, June 5 – 9, **2016.**
Invited Lecture – "Structural flexibility in the solid state"

57 MASC2015, Annual Meeting of the RSC Macrocyclic and Supramolecular Chemistry Group
Durham, United Kingdom, December 21-22, **2015.**
Invited Lecture – "Structural flexibility in the solid state"

56 42nd National Convention of the South African Chemical Institute
Durban, South Africa, November 29 to December 4, **2015.**
SACI Gold Medal Lecture – "Structural flexibility in the solid state"

55 2nd ICSU/IUPAC Workshop on Crystal Engineering
Como, Italy, August 30 to September 1, **2015.**
Invited lecture – "Structural flexibility in the solid state"

54 29th European Crystallographic Association Meeting
Rovinj, Croatia, August 23-28, **2015.**
Invited lecture – "Dynamics of porous metal-organic frameworks"

53 Smarter Materials for a Sustainable Future - ordered and semi-ordered materials for application in sustainable chemical technologies
South Africa - UK Scientific Seminar, Stellenbosch University, South Africa, January 21-23, **2015**.
Plenary lecture – "New approaches to understanding gas-solid interactions"

52 Midwest Regional Meeting of the American Chemical Society
Columbia MO, USA, November 12-15, **2014**.
Invited lecture – "Guest-induced single-crystal transformations"

51 Particle Technology Workshop (Jointly organized by SASOL and PORETECH)
Cape Town, South Africa, November 4, **2014**.
Plenary lecture – "Porosity in Flexible Metal-Organic Frameworks"

50 5th IUPAC International Conference on Green Chemistry
Durban, South Africa, August 17-21, **2014.**
Plenary lecture – "Understanding porosity in flexible metal-organic systems"

49 XXIII Congress of the International Union of Crystallography
Montreal, Canada, August 5-12, **2014.**
Invited lecture – "In-situ analysis of gas-loaded porous materials"

48 Particle Technology Workshop (Jointly organized by SASOL and PORETECH)
Pretoria, South Africa, November 12-13, **2013**.
Plenary lecture – "Porosity in Flexible Metal-Organic Systems"

47 XIV International Seminar on Inclusion Compounds
Edinburgh, U.K., August 18-24, **2013**.
Plenary lecture – "Porosity in Flexible Metal-Organic Systems"

46 2013 Meeting of the American Crystallographic Association
Honolulu, Hawaii, USA., July 20-24, **2013**.
Keynote lecture – "Porosity in Flexible Metal-Organic Systems"

45 South African Chemical Institute Conference on Inorganic Chemistry (INORG2013)
Durban, South Africa, July 1-4, **2013.**
Plenary Lecture – "Porosity in Flexible Metal-Organic Systems"

45 Past, Present, and Future of Crystallography - From Small Molecules to Macromolecules and Supramolecular Structures (An event to celebrate the 150th anniversary of the founding of the Politecnico di Milano and the 50th anniversary of the award of a Nobel Prize to Giulio Natta).
Politecnico di Milano, Milan, Italy June 6-7, **2013.**
Plenary Lecture – "Porosity in Flexible Metal-Organic Systems"

44 22nd Midwest Organic Solid-State Chemistry Symposium; MOSSCS-XXII
Missouri State University, Springfield, MO, USA June 1-2, **2012.**
Keynote Lecture – "Structural Flexibility in the Solid State"

43 243rd American Chemical Society National Meeting
San Diego, California, U.S.A., March 25-29, **2012**.
Keynote lecture – "Porosity in Flexible Metal-Organic Systems"

42 Inauguration of the Centre for Advanced Membranes and Porous Materials
King Abdullah University of Science and Technology, Saudi Arabia, March 6-7, **2012**.
Invited lecture – "Porosity in Flexible Metal-Organic Systems"

41 3rd Asian Conference on Coordination Chemistry
New Delhi, India, October, 17-20, **2011**.
Keynote lecture – "Porosity in Flexible Metal-Organic Systems"

40 XIII International Seminar on Inclusion Compounds
Gierloz, Poland, September 11-16, **2011**.
Invited lecture – "Structure-property relationships of inclusion compounds"

39 XXII Congress of the International Union of Crystallography
Madrid, Spain, August 22-30, **2011.**
Keynote lecture – "Structure-property relationships of inclusion compounds"

38 40th South African Chemical Institute National Convention
Johannesburg, South Africa, January 17-21, **2011.**
Keynote lecture – "Design, Assembly and Characterisation of Discrete Porous Systems"

37 PACIFICHEM – the 2010 International Chemical Congress of Pacific Basin Societies
Honolulu, Hawaii, USA, December 15-20, **2010.**
Invited lecture – "Structure-Property Relationships of Some Diyne-Diol Compounds"

36 South African Chemical Institute Conference on Inorganic Chemistry (INORG2009)
Bloemfontein, South Africa, September 13-17, **2009.**
Keynote lecture – "Porosity in Flexible Metal-Organic Systems"

35 25th European Crystallographic Association Meeting
Istanbul, Turkey, August 16-21, **2009.**
Invited lecture – "Structure-Property Relationships of Two Host-Guest Systems"

34 International Symposium on Macrocyclic and Supramolecular Chemistry
Maastricht, the Netherlands, June 20-25, **2009.**
Invited lecture – "Porosity in Flexible Metal-Organic Systems"

33 XIX International Conference on the Chemistry of the Organic Solid State
Sestri Levante, Italy, June 14-19, **2009.**
Invited lecture – "Structure-Property Relationships of Dumbbell-Shaped Diyne Compounds"

32 XXI Congress of the International Union of Crystallography
Osaka, Japan, August 23-31, **2008**.
Invited lecture – "Porosity in flexible metal-organic systems"

31 Fourth International Conference of the African Materials Research Society
Dar es Salaam, Tanzania, December 10-14, **2007**.
Invited lecture – "Porous Crystals: Discovery and Design"
Session chair

30 Carman National Physical Chemistry Symposium
Cape Town, South Africa, September 23-27, **2007**.
Invited lecture – "Porosity in crystals"

29 24th European Crystallographic Association Meeting
Marrakech, Morocco, August 22-27, **2007**.
Invited lecture – "The Influence of Intermolecular Interactions in Host-Guest Systems"

28 24th European Crystallographic Association Meeting
Marrakech, Morocco, August 22-27, **2007**.
Plenary lecture – "From small molecules to extended structures"

27 2007 Meeting of the American Crystallographic Association
Salt Lake City, USA, July 21-26, **2007**.
Keynote lecture – "Porous Crystals: Discovery and Design"

26 XI International Seminar on Inclusion Compounds
Kiev, Ukraine, June 10-15, **2007**.
Invited lecture – "Porous Crystals: Discovery and Design"

25 37th International Conference on Coordination Chemistry
Cape Town, South Africa, August 13-18, **2006**.
Invited lecture - "Assembly of porous materials using zero-dimensional metal-organic systems"
Session chair

24 23rd European Crystallographic Association Meeting
Leuven, Belgium, August 6-11, **2006**.
Invited lecture – "Single crystal transformations"
Session chair

23 Carman National Physical Chemistry Symposium
Midrand, South Africa, November 16-18, **2005**.
Invited lecture – "Porosity in crystals"

22 X International Seminar on Inclusion Compounds
Kazan, Russia, September 19-23, **2005**.
Invited lecture – "Porosity in molecular crystals"
Session chair

21 Third International Workshop on Advanced Materials (WAM-III)
Stellenbosch, South Africa, September 5-8, **2005**.
Invited lecture – "Porosity in molecular crystals"
Session chair

20 XX Congress of the International Union of Crystallography
Florence, Italy, August 23-31, **2005**.
Invited lecture – "Porosity in molecular crystals"

19 Nanotechnology – The Building Block for Tomorrow's Advanced Technology
Perth, Australia, July 17-20, **2005**.
Plenary lecture – "Self-assembled Structures"

18 International Hydrogen Energy Congress
Istanbul, Turkey, July 13-15, **2005**.
Invited lecture – "Organic Crystals for Hydrogen Sorption"

17 South African Chemical Institute Conference on Inorganic Chemistry
Pietermaritzburg, South Africa, April 10-13, **2005**.
Invited lecture - "Supramolecular Coordination Chemistry: Porous Frameworks, Helices and Rotaxanes"

16 22nd European Crystallographic Association Meeting
Budapest, Hungary, August 24-29, **2004**.
Invited lecture – "Enclosing Chemical Space"
Session chair

15 38th Midwest Regional Meeting of the American Chemical Society
Columbia, Missouri, November 5-7, **2003**.
Invited lecture - "Guest Diffusion in Nonporous Organic Solids"

14 21st European Crystallographic Association Meeting
Durban, South Africa, August 24-29, **2003**.
Invited lecture – "Guest Diffusion in a Nonporous Organic Solid"

13 223rd American Chemical Society National Meeting
Orlando, Florida, April 7–11, **2002**.
Poster presentation

12 11th Royal Australian Chemical Institute Convention
Australian National University, Canberra, Australia, February 6–9, **2000**.
Invited lecture: "Nanoscale Spheres and Tubes"

11 21st Meeting of the Society for Crystallographers in Australia
Thredbo, New South Wales, Australia, February 1–4, **2000**.
Lecture: "Water Clusters in the Solid State"

10 28th International Summer School on Crystal Engineering: From Molecules and Crystals to Materials
Erice, Italy, May 12–23, **1999**.
Three poster presentations

9 American Crystallographic Association, Annual Meeting
St. Louis, Missouri, U.S.A., July 19-25, **1997**.

8 211th American Chemical Society National Meeting
New Orleans, Louisiana, U.S.A., March 24-28, **1996**.

7 8th International Symposium on Molecular Recognition and Inclusion
Ottawa, Canada, July 31 - August 5, **1994**.

6 14th International Symposium on Macrocyclic Chemistry
Lawrence, Kansas, U.S.A. - June 12-17, **1994**.
Poster presentation

5 2nd International Conference on Molecular Recognition and Synthetic Design
University of Cape Town, South Africa, February 9-11, **1994**.
Student lecture: "Kinetics of Inclusion"

4 4th International Summer School on Supramolecular Chemistry
Sobieszewo, Poland, June 14-25, **1993**.
Poster presentation

3 1st International Conference on Molecular Recognition and Synthetic Design
University of Cape Town, Rondebosch, South Africa, February 12-14, **1992**.

2 31st Convention of the South African Chemical Institute
Rhodes University, Grahamstown, South Africa, June 23-27, **1991**.

1 6th International Symposium on Molecular Recognition and Inclusion
Berlin, Federal Republic of Germany, September 10-14, **1990**.
Poster presentation