

CURRICULUM VITAE

Deanna M. D'Alessandro

1. PERSONAL DETAILS

Nationality: Australian
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2. RESEARCH GROUP DETAILS

- Current (2018): 3 PhD students, 1 Masters student, 2.5 Honours students, 1 Postdoctoral Fellow
- Completions (since 2011): 6 PhD students and 17 Honours students (2 University Medals, 13 Class I, 2 Class IIa)

3. EDUCATION

James Cook University, Queensland, Australia

- Doctor of Philosophy (awarded *cum laude* with PhD Medal for Excellence), conferred 2006
Thesis: "Stereochemical Effects on Intervalence Charge Transfer" (Supervised by Emeritus Professor Richard Keene)
- Bachelor of Science with Honours in Chemistry (Class I, University Medal), 2000
- Bachelor of Science (major in Chemistry, sub-majors in Physics and Mathematics), 1997-1999

4. CAREER-TO-DATE

- Australian Research Council Future Fellow, School of Chemistry, University of Sydney (2018-2021)
- Deputy Head of School (Apr. 1st 2018-present)
- Associate Professor (Jan. 1st 2017)
- Australian Research Council Queen Elizabeth II Fellow, School of Chemistry, University of Sydney (2011-2016*)
*Maternity leave undertaken during 2015-16 (14 weeks full time, 38 weeks part time)
- Lecturer for 3rd Year "Metal Complexes: Medicine and Materials" (2012-present), School of Chemistry, University of Sydney
- Lecturer for 2nd Year "Coordination Chemistry" (2010-present), School of Chemistry, University of Sydney
- Lecturer for 3rd Year "Advanced Topics on Electron Transfer" (2012) School of Chemistry, University of Sydney
- Appointed Lecturer, School of Chemistry, University of Sydney (Sept. 2010 – deferred to 2017)
- University of Sydney Postdoctoral Research Fellow (2010), School of Chemistry, University of Sydney
- Academic Laboratory Supervisor, 2nd and 3rd Year Laboratories, School of Chemistry, University of Sydney (Apr. 2010-present)
- Postdoctoral Research Fellow, Department of Chemistry, University of California, Berkeley, USA, Supervised by Prof. Jeffrey R. Long (Jun. 2007-Sept. 2009)
- Visiting Graduate School Lecturer for "Electron Transfer Theory and Applications", California Institute of Technology, USA (Feb. 2009)
- Postdoctoral Research Fellow, Molecular Electronics Group, University of Sydney, Supervised by Prof. Jeffrey Reimers, Em. Prof. Noel Hush and Prof. Maxwell Crossley (Feb. 2006-2007)
- Laboratory Demonstrator for First Year Chemistry, James Cook University (2000-2005)
- Research Fellow, Department of Chemistry, James Cook University (Sept.-Dec. 2005)
- Doctoral Research, Department of Chemistry, James Cook University, Supervised by Em. Prof. Richard Keene (Mar. 2001-Aug. 2005)
- Doctoral Research, Centre for Nanotechnology, Northwestern University, Evanston, IL, USA, Supervised by Prof. Joseph T. Hupp (Aug.-Oct. 2003)
- Summer Vacation Scholar in Chemistry, Research School of Chemistry, Australian National University, Canberra (Nov. 1999-Feb. 2000)
- Summer Vacation Scholar in Chemistry, School of Science, Griffith University, Brisbane (Nov. 1998-Feb. 1999)

5. PRIZES & AWARDS

- Royal Australian Chemical Institute (RACI) Alan Sargeson Lectureship (2017)
- Australian Academy of Science Le Févre Memorial Prize (2017)
In recognition of outstanding basic research in chemistry by researchers up to 10 years post-PhD for research conducted mainly in Australia
- ChemComm Emerging Investigator Lectureship (2015)
One of two awarded internationally in 2015 by the Royal Society of Chemistry (UK) to recognise an emerging scientist in the early stages of their independent academic career
- Royal Australian Chemical Institute (RACI) Rennie Medal (2014)
For a researcher with less than 10 years of professional experience for research published over the past 8 years that has contributed most towards the development of a branch of chemical science
- Distinguished Lectureship Award, The Chemical Society of Japan (2012, Tokyo, Japan)
One of 6 awarded across the Asia-Pacific region
- NSW Young Tall Poppy Award (2011, Australian Institute of Policy and Science)
- L'Oréal Australia for Women in Science Fellowship (2010, \$20,000)
One of 3 awarded from 160 applications Australia-wide. See http://www.youtube.com/watch?v=qnjYd_SEt74. National press coverage: August 25th 2010, p. 24: The Australian Higher Education Supplement, "Carbon Emissions Researcher Captures Prize"; 13th September 2010, ABC 7 pm News: "Crystal sponges to mop up power station CO₂"
- JCU Outstanding Early Career Alumni Award (2010)
One of five awarded for the past 10 years during the 40th Anniversary celebrations of James Cook University
- Royal Commission for the Exhibition of 1851 Research Fellowship (2007-2009, £46,000)
One of 6 awarded across Commonwealth countries in 2007
- Dow Chemical Company Foundation Fellowship of the American Australian Association (2007-2008, US\$25,000)
- Winner of 'Fresh Science 2006'
Selected from early-career scientists Australia-wide for the best presentation of their research to the general public through local and national newspaper, radio and television interviews (see <http://www.scienceinpublic.com/sciencenow/2006/2006fresh.htm>)
- International Union of Pure and Applied Chemistry (IUPAC) Prize for Young Chemists (2007)
One of five awarded world-wide for the most outstanding PhD theses in the chemical sciences
- Royal Australian Chemical Institute (RACI) Cornforth Medal (2006)
For the most outstanding PhD thesis submitted in a branch of chemistry in Australia
- JCU PhD Medal for Excellence for a Doctoral Research Thesis (2006, awarded *cum laude*)
- Don Stranks Award (one of two awarded), RACI Inorganic Division National Conference (2003, Melbourne)
- Semi-Finalist in 2002 Young Queenslander of the Year Awards (Career Achievement Category)
- University Medal (2000)
- G.N. Richards Medal in Chemistry (1999)
For the best overall performance and ability in undergraduate chemistry subjects
- Joe and Val Baker Prize for Third Year Organic Chemistry
For the highest achievement in third year Organic Chemistry
- H.J. Priestly Memorial Prize (1998)
For the best overall performance and ability in second year mathematics and physics subjects
- Royal Australian Chemical Institute (North Queensland Branch) Prize for Second Year Chemistry (1998)
For the best overall performance in second year chemistry subjects
- Faculty of Science and Engineering First Year Prize (1997)
As the most outstanding student in first year science and engineering disciplines
- Royal Australian Chemical Institute (Queensland Branch) Prize for First Year Chemistry (1997)
For the best performance in first year chemistry subjects
- Dux of the School and Ampol Best All-Rounder Medal, Smithfield State High School (1996)

6. COMPETITIVE FELLOWSHIP & GRANT FUNDING

Research

- Australian Research Council Future Fellowship, “Harnessing Electroactivity in Metal-Organic Frameworks (MOFs)” (\$860,000, 2018-2021, sole-CI)
- Sydney Research Accelerator Research (SOAR) Fellowship, University of Sydney (\$100,000, 2017-18)
- Australian Research Council Discovery Grant, “Putting Metal-Organic Frameworks (MOFs) to Work at Interfaces” (\$463,000, 2018-2020, co-CI) with Professor Vicki Chen (led by UNSW)
- University of Sydney-University of California, Davis Priority Partnership Collaboration Award (\$40,000, 2017-2018) with C. Kepert and L. Berben
- Australian Research Council Discovery Grant, “A Radical Approach to Multifunctional Coordination Solids” (\$483,000, 2015-2017, lead-CI) with B. Abrahams and R. Robson
- Australian Research Council Discovery Grant, “Advanced Functional Properties in Metal-Organic Framework Materials” (\$420,000, 2012-2014, co-CI) with C. Kepert
- CSIRO Science and Industry Endowment Fund 2011, “Solving the Energy Waste Roadblock” (\$6 Million, 2011-2016) with C. Kepert, M. Hill, S. Batten, D. Turner, B. Ladewig, A. Chaffee, R. Robson, B. Abrahams, S. Kentish, C. Doonan, C. Sumbly, J. Stride, M. Cole, V. Peterson, A. Hill, A. Thornton, D. Kennedy and N. Burke
- Emerging Future Leaders Fellowship from the Australia-China Joint Coordinating Group (JCG) and the Australian Academy of Sciences and Engineering (ATSE) (\$1000, 2013)
- Australian Research Council QEII Discovery Grant, “Conducting Nanoporous Materials: toward Molecular Devices” (\$788,000, 2011-2016, sole-CI)
- University of Sydney Postdoctoral Research Fellowship (\$55,000, One of ten awarded in 2010)
- University of Sydney ARC ‘near-miss’ Bridging Support Scheme Grant (\$10,000, 2010)
- Sustainable Products and Solutions Programme Grant, “CO₂ Capture in Alkylamine-Appended Metal-Organic Frameworks” (US\$250,000, 2008-2009) with J. R. Long
- Recipient of 2007 British Council Australia study tour of the UK (\$4000)
- JCU Doctoral Research Scheme Grant to undertake research in the Centre for Nanotechnology, Northwestern University, USA (2003)
- Australian Postgraduate Award (2001-2004)
- A.L. Nevitt Bursary in Chemistry (2000)
- Southern Cross Foundation Undergraduate Scholarship (\$40,000, 1997-2000)
One of four students selected Australia-wide in 1996 by Mr John Bertrand AM “on the basis of scholastic excellence, extra-curricular achievements in sport and community service, leadership potential and personal qualities”
- James Cook University Entry Scholarship (for achieving an OP1, 1997)

Equipment

- Australian Research Council Linkage Infrastructure and Equipment Grant, “Australian high field electron paramagnetic resonance facility” (\$650,000, 2017) with N. Cox, J. Mackay, D. McCamey, N. Dixon, G. Swiegers, G. Otting, G. King, M. Badger, M. Coote, J. Harmer, P. Lay, W. Lubitz
- Australian Research Council Linkage Infrastructure and Equipment Grant, “Fabrication Facility for Oxygen Sensitive Electronic Materials” (\$240,000, 2015) with D. R. McCamey, T. Schmidt, G. Lakhwani, J. J. Gooding, J. N. Hart
- Australian Research Council Linkage Infrastructure and Equipment Grant, “A State-of-the-art Magnetic Property Measurement Facility for the Development of Advanced Materials and Biomedical Technologies in the Sydney Basin” (\$375,000, 2012) with S. Li, C. Kepert, C. Zhang, L. Sheppard, R. Amal, R. Zheng, B. Kennedy, V. Sahajwalla, Z. Guo, C. Ling and F. Klose
- University of Sydney Major Equipment Grant Scheme for gas-sorption instrumentation (\$100,000, 2013) with S. Neville, M. Choucair, C. Kepert, T. Maschmeyer, A. Masters and J. Canning
- University of Sydney Major Equipment Grant Scheme for a CARY5000 spectrometer (\$110,000, 2012) with P. Lay, C. Kepert, R. Payne, T. Maschmeyer and A. Masters
- AINSE Research Award, “Electro- and Spectro-electrochemical Characterisation of Metal-Organic Frameworks and Lanthanide-based Solid Materials” (\$6,200, 2011) with C. Fabian and G. Lumpkin
- University of Sydney Minor Equipment Grant Scheme (\$13,300, 2010)

7. RESEARCH PRESENTATIONS

Invited Research Presentations

- Plenary Lecture, RACI Victorian Branch Student Symposium, La Trobe University (2017)
- Keynote Lecture, MacDiarmid Institute Annual Symposium, Victoria University, Wellington NZ (2017)
- Keynote Lecture, International Symposium on Macrocyclic and Supramolecular Chemistry, Cambridge UK (2017)
- Fundamentals and Applications of Advanced Porous Materials Conference, Adelaide (Dec. 2016)
- The Bond Electroanalytical Symposium, “An Electrochemical Symposium to celebrate Alan Bond’s past, present and future contributions”, University of Melbourne (Dec. 2016)
- Materials Research Society (MRS) OnDemand Webinar Series “Metal-Organic Frameworks for Electronics and Photonics” (Nov. 2016)
- 5th International Conference on Metal-Organic Frameworks and Open Framework Compounds, USA (Sept. 2016)
- *ChemComm* Emerging Investigator Lecture, The International Chemical Congress of Pacific Basin Societies “Pacifichem2015”, Hawaii, USA (Dec. 2015)
- Gordon Research Conference in Nanoporous Materials, New Holderness School, New Hampshire, USA (Aug. 2015)
- Inaugural Student Seminar Series Lecturer, Research School of Chemistry, Australian National University (Jun. 2014)
- International Symposium, Asian Chemical Society Annual Meeting, Tokyo, Japan (Mar. 2012)
- Keynote Lecture at the RACI Inorganic Division Conference, Perth, Australia (Dec. 2011)
- Metal-Organic Frameworks Symposium, 9th International Meeting of the Pacific Rim (PACRIM), Cairns, Australia (Jul. 2011)
- Nanoporous Materials Symposium at the 238th American Chemical Society Meeting, Washington DC, USA (Fall 2009, session co-Chair)
- Gordon Research Conference in Inorganic Chemistry, University of New England, Maine, USA (Jun. 2009)
- Inaugural Robert H. Dalton Seminar in Chemical Catalysis, The Beckmann Institute, California Institute of Technology, California, USA (Feb. 2009), Invited by Prof. Harry Gray
- ‘New Faces’ Symposium Lecture, Royal Australian Chemical Institute-New Zealand Chemical Institute Inorganic Chemistry Conference, Christchurch, New Zealand (Dec. 2008)
- 41st IUPAC World Chemistry Congress, Torino, Italy (Aug. 2007). *Invited as one of 5 recipients of a 2007 IUPAC Prize for Young Chemists.*
- Symposium on Electron Transfer to Commemorate the 80th Birthday of Em./Prof. Noel Hush AO FAA FRS (University of Sydney, May 2005)
- Don Stranks Symposium Lecture, RACI Inorganic Chemistry Division National Conference, (University of Melbourne, Feb. 2003). *This presentation received one of two Don Stranks Awards for the best student presentation at the conference.*

*Upcoming Invited Research Presentations**

- Keynote Lecture, International Conference on Coordination Chemistry, Sendai, Japan (Aug. 2018)
- Keynote Lecture, AsCA 2018/CRYSTAL 32 a combined conference of the Asian Crystallographic Association (AsCA) and the Society of Crystallographers in Australia and New Zealand (SCANZ), Auckland NZ (Dec. 2018)
- Plenary Lecture, 7th Asian Conference on Coordination Chemistry (ACCC7), Kuala Lumpur, Malaysia (Oct. 2019)

**The following invitations were declined due to my responsibilities as a primary carer for my child:*

- Keynote Industrial Presentation, CSIRO Catalysed Energy Storage in Chemicals Symposium, Melbourne (2017)
- ACS National Conference, Fundamentals of Metal Organic Framework Catalysis Symposium, USA (2017)
- NZIC-16, The biennial conference of the New Zealand Institute of Chemistry, Queenstown, NZ (2016)
- Kavli Conference of the National Academy of Sciences USA, Indonesia (2016)
- 7th International Conference on Advanced Materials and Nanotechnology, NZ (2015)
- Stranks Memorial Lecture, Melbourne University Chemical Society (2015)

Other Research Presentations

- “Exploiting Redox Activity in Metal-Organic Frameworks for Functional Properties” – Oral presentations on this topic at Curtin University, May 2017; University of Western Australia, May 2017; Massey University, NZ, June 2017; University of Otago, June 2017; RACI 100th Year Congress, Melbourne, July 2017; James Cook University, August 2017; University of Tasmania, October 2017; University of South Australia, November 2017; University of Adelaide, November 2017; Australian National University, November 2017; Department of Chemistry, Colorado State University, USA, May 2016; Department of Chemistry, University of North Carolina at Chapel Hill, USA, May 2016; Department of Chemistry, Massachusetts Institute of Technology, USA, May 2016; School of Physics and Advanced Materials, University of Technology Sydney, March 2015; RACI National Congress, Adelaide, December 2014; Department of Chemistry, University of Wollongong, May 2013; Osaka University, Japan, March 2012; SCANZ Crystal’29 Conference, Gold Coast, April 2014; University of Adelaide, April 2014; International Conference on Coordination Chemistry (ICCC’41), Singapore, July 2014; 4th International Conference on Metal-Organic Frameworks and Open Framework Compounds, Kobe, Japan, October 2014.
- “From Spin-based Electronics to Carbon Capture in Metal-Organic Frameworks” – Oral presentations at University of Queensland, August 2011, University of Melbourne, August 2010; University of Sydney, October 2010; University of New South Wales, November 2010; University of Wollongong Innovation Campus, December 2010.
- “Towards New Materials for Carbon Dioxide Capture” – Oral presentations on this topic at the Carbon Capture and Storage Technical Showcase, Melbourne, August 2011; School of Chemistry, University of Sydney, June 2010; School of Chemical and Biomolecular Engineering, University of Sydney, March 2010; Department of Chemistry, Monash University, February 2010; Australian Institute of Nuclear Science and Engineering (ANSTO), Sydney, December 2009; 2nd International Asian Conference on Coordination Chemistry, Nanjing, China, November 2009; Kenan Research Seminar in Inorganic Chemistry, University of New England, USA, June 2009; Osaka University Forum on Bio-Environmental Chemistry, San Francisco U.S.A., December 2008.
- “Mixed Valency: From Discrete Molecules to Electrically-Conducting Metal-Organic Frameworks” – Poster presentation on this topic at Gordon Research Conference on Electron Donor Acceptor Interactions, Rhode Island U.S.A., August 2008.
- “Porphyrin-Appended Dendrimers for Molecular Electronics” – Oral and poster presentations on this topic at National Conference of the Division of Inorganic Chemistry, Royal Australian Chemical Institute, Hobart, Australia, February 2007; British Council Australia Study Tour of the UK, Departmental Seminar Series, University of Durham and University of Southampton, April 2007; Australian Research Council Nanotechnology Summer School, Stradbroke Island, Queensland, Australia, December 2006; Symposium in honour of Professor Bob Gilbert, University of Sydney, September 2006; 4th International Conference on Porphyrins and Phthalocyanines, Rome, Italy, July 2006 (This presentation received one of two New Journal of Chemistry poster prizes).
- “Stereochemical Effects on Intervalence Charge Transfer in Polymetallic Assemblies” – Oral and poster presentations on this topic at Gordon Research Conference on Electron Donor-Acceptor Interactions, Rhode Island, Newport, U.S.A., August 2006; Symposium on Supramolecular Chemistry to mark the Retirement of Professor Leonard F. Lindoy FAA, University of Sydney, February 2006; 12th National Convention of the Royal Australian Chemical Institute, Sydney, Australia, July 2005; National Conference of the Royal Australian Chemical Institute, Sydney, Australia, July 2005 (This presentation received an Inorganic Chemistry Division poster prize); XXIX International Symposium on Macrocyclic Chemistry (XXIX ISMC), Cairns, Australia, July 2004; Townsville Festival of Life Sciences, Townsville, November 2004 (This presentation received two poster prizes sponsored by Progen Biosciences and Livingstone International).

8. ENGAGEMENT, SERVICE & OUTREACH

Professional Roles

- Chair, Equity, Diversity & Inclusion (EDI) Committee, School of Chemistry, University of Sydney (Nov. 2017-present)
- Deputy Head of School of Chemistry, The University of Sydney (Apr. 2017-present)
- Deputy Honours Coordinator, School of Chemistry, The University of Sydney (2017)

Editorial Roles

- Associate Editor, *Australian Journal of Chemistry* (CSIRO Publishing) (Apr. 2018-present)
- Guest Editor (with A/Prof Ognjen Miljanic (University of Houston, USA)), Special Edition of *Supramolecular Chemistry* (Taylor & Francis) for ISMSC (2017)

Formal Mentoring

- Mentor for L'Oreal For Women in Science Mentoring Program – Dr Hoang Phan (UTas)
- Mentor and AP&D Advisor for Dr Sam Duyker (USyd)
- SPAM (Strategic Promotion Advice and Mentoring) program for promotion to Levels C and D – 1 mentee (2018)

Lectures

- Sydney Science Forum Public Lecture “Catch CO₂”, University of Sydney (Sept. 2015)
- Alumni speaker for the National Youth Science Forum Launch of “Science 50:50” with Prof. Veena Sahajwalla (Australian Institute of Sport, Canberra, Jan. 2015)
- Chemistry Education Association of Victoria *November Lectures* for high school teachers, Melbourne (Nov. 2013)
- Ruby Payne Scott Memorial Lecture, Danebank Anglican Girls High School, Sydney (Oct. 2011)
- Harry Messel International Science School Lecturer, School of Physics, University of Sydney (Jul. 2011)
- Occasional Speaker, Faculty of Science Graduation Ceremony, University of Sydney (May 2011)
- Orica black tie dinner speaker, International Year of Chemistry Launch, Great Hall, Parliament House, Canberra (Feb. 2011)
- Australian Federation of Graduate Women End of Year Lecture, Sydney Mechanics' School of Arts (Nov. 2010)
- Alumni speaker for the National Youth Science Forum Rotary Dinner (Australian National University, Canberra, Jan. 2007).

Symposium Coordination and Reviewing

- Pacificchem2020 Symposium Reviewer for (Chemistry of Energy Australia Topic reviewer) (2018)
- Organising committee (with Prof. Kate Jolliffe (chair)) International Conference on Macrocyclic and Supramolecular Chemistry, Sydney, Australia (ISMCS2020, June 2020)
- Organising committee (with Prof. Paul Webley (chair)) 13th Conference on Fundamentals of Adsorption 2019 (FOA13, May 2019)
- Organising committee (with Prof. Shane Telfer (chair)) for 6th International Conference on Metal-Organic Frameworks and Open Framework Materials in Auckland, NZ (MOF2018, Dec. 2018)
- Co-organiser (with Assist/Prof Hiroaki Iguchi (Tohoku University, Japan), A/Prof Mircea Dinca (MIT, USA), A/Prof Hoi Ri Moon (UNIST, Korea), A/Prof Yumi Yakiyama (Osaka University, Japan), Assist/Prof Wataru Kosaka (Tohoku University, Japan), Assist/Prof Kazuya Otsubo (Kyoto University, Japan), and Assist/Prof Zhongyue Zhang (Nagoya University, Japan) of the session titled "Electron-Conductive/Redox-Active Coordination Polymers" in the 43rd International Conference on Coordination Chemistry, Sendai, Japan (ICCC); Jul.-Aug. 2018)
- Co-organiser (with Drs Tony Keene, Suzanne Neville and Jon Kitchen) of the Inaugural Southampton-Australia-New Zealand Magnetism Symposium (SANZMAG; Feb. 2014)
- Organiser of the Inaugural RACI One-Day Student Symposium in Inorganic Chemistry for NSW/ACT (Oct. 2012), Guest of Honour, Professor Harry B. Gray (Caltech)
- Referee for American Australian Association Fellowships (2017-present)
- Referee for Australian Research Council Grants (2012-present)

Other

- President of Sydney University Chemical Society (2015)
- Foundation for Inorganic Chemistry Honorary Secretary and High School Outreach Coordinator (2012-present)
- Coordinator for Nanjing-Sydney International Exchange Programme (2013-2014)
- Science Meets Parliament (2010 representative of the Royal Australian Chemical Institute)
- Feature Interview for the American Australian Association (2009, <https://vimeo.com/2508030>)
- Volunteer for “Exploring Your Horizons” (Mills College, Oakland, USA, 2008)
A programme encouraging female high school students to pursue science
- Featured on 2007 ABC series “Ace Day Jobs!”
A television/DVD/broadband series featuring young professionals designed to encourage and inspire high school students (see <http://www.abc.net.au/acedayjobs/cooljobs/profiles/s2102676.htm>)
- Appointed Justice of the Peace for Queensland (Qualified since 2003)
- Postgraduate representative of the Royal Australian Chemical Institute Inorganic Chemistry Division (2003-2004)
- Senior Residential and Academic Tutor, The John Flynn College, James Cook University (2003-2004)
Received 2003 Peter Milaras Award for contributions to the Academic Life of the John Flynn College
- President of the James Cook University Molecular Sciences Society (2003)
- Postgraduate representative, School of Pharmacy and Molecular Sciences Safety Committee (2002-2003)

9. PROFESSIONAL AFFILIATIONS

- Australian Chemical Institute (Member Chartered Chemist)
- Association of Justices of the Peace and Commissioners of Declarations

10. PUBLICATIONS

Book Chapters

1. P.M. Usov, C.F. Leong and D.M. D'Alessandro, "Conducting Framework Materials", in *Monographs in Supramolecular Chemistry*, Ed. R. Banerjee, Royal Society of Chemistry Publishing, Cambridge, pp. 247-280 (2017).
2. V.K. Peterson, A. Das and D.M. D'Alessandro, "CO₂ Separation, Capture and Storage in Porous Materials", in *Neutron Applications in Materials for Energy*, Ed. G.J. Kearley and V.K. Peterson, Springer International Publishing, Switzerland, pp. 33-60 (2015).

Peer-Reviewed Journal Articles

3. C. Hua, P.W. Doheny, B. Ding, B. Chan, M. Yu, C.J. Kepert, D.M. D'Alessandro, "Through-Space Intervalence Charge Transfer as a Mechanism for Charge Delocalization in Metal-Organic Frameworks," *J. Am. Chem. Soc.*, **2018**, just accepted, DOI: 10.1021/jacs.8b02638. {**Highlighted** in *Chemistry in Australia*, Aug. 2018}
4. R.W. Elliot, P.M. Usov, B.F. Abrahams, B. Chan, R. Robson, D.M. D'Alessandro, "Inter-ligand Charge Transfer Interactions in Electroactive Coordination Frameworks Based on *N,N'*-Dicyanoquinonediimine," *Inorg. Chem.* **2018**, DOI: 10.1021/acs.inorgchem.8b00130. {**Invited contribution** for special issue "Reactivity of Metal Complexes with Ligand Centered Radicals"}
5. W. Liang, L. Li, J. Hou, N.D. Shepherd, T.D. Bennett, D.M. D'Alessandro, V. Chen., "Linking Defects, Hierarchical Porosity Generation and Desalination Performance in Metal-Organic Frameworks," *Chem. Sci.*, **2018**, DOI: 10.1039/C7SC05175A. {**Highlighted** in *Chemistry in Australia*, June 2018}
6. R.J. Walwyn, B. Chan, P.M. Usov, M.B. Solomon, S.G. Duyker, J.-Y. Koo, M. Kawano, P. Turner, C.J. Kepert and D.M. D'Alessandro, "Spectroscopic, electronic and computational properties of an unexplored mixed tetrachalcogenafulvalene and its charge transfer complex," *J. Mater. Chem. C*, **2018**, 6, 1092-1104.
7. P.D. Sutrisna, J. Hou, M.Y. Zulkifli, H. Li, Y. Zhang, W. Liang, D.M. D'Alessandro and V. Chen, "Surface Functionalized UiO-66/Pebax-based ultrathin composite hollow fiber gas separation membranes," *J. Mater. Chem. A*, **2018**, 6, 918-931. {**Back Cover**}
8. P.M. Usov, H. Jiang, H. Chevreau, V.K. Peterson, C.F. Leong and D.M. D'Alessandro, "Guest-Host Complexes of TCNQ and TCNE with Cu₃(1,3,5-Benzenetricarboxylate)₂," *J. Phys. Chem. C*, **2017**, 121(47), 26330-26339.
9. R. Murase, C.F. Leong, D.M. D'Alessandro, "Mixed Valency as a Strategy for Achieving Charge Delocalization in Semiconducting and Conducting Framework Materials," *Inorg. Chem.*, **2017**, 56 (23), 14373-14382. {**Invited Viewpoint article**}
10. C. Hua and D.M. D'Alessandro, "Systematic Tuning of Zn(II) frameworks with Furan, Thiophene and Selenophene Dipyridyl and Dicarboxylate Ligands," *Cryst. Growth Des.*, **2017**, 17(12), 6262-6272.
11. C. Hua, S. Woo, A. Rawal, F. Tuna, J.M. Hook, D. Collison and D.M. D'Alessandro, "Redox-state Dependent Spectroscopic Properties of Porous Organic Polymers Containing Furan, Thiophene and Selenophene," *Aust. J. Chem.*, **2017**, 70, 1227-1234. {**Invited contribution** in special edition for the 2017 RACI awards}
12. R. Murase, B.F. Abrahams, D.M. D'Alessandro, C.G. Davies, T.A. Hudson, G.N.L. Jameson, B. Moubaraki, K.S. Murray, R. Robson, A. Sutton, "Mixed Valency in a 3D Semiconducting Iron-Fluoranyl Coordination Polymer," *Inorg. Chem.*, **2017**, 56(15), 9025-9035.
13. J.S. Caddy, T.B. Faust, I.M. Walton, J.M. Cox, J.B. Benedict, M.B. Solomon, P.D. Southon, C.J. Kepert and D.M. D'Alessandro, "Photoactive and Physical Properties of an Azobenzene-Containing Coordination Framework," *Aust. J. Chem.*, **2017**, 70, 1171-1179. {**Invited contribution** in special edition for the 2017 RACI awards}
14. P.M. Usov, A.N. Simonov, A.M. Bond, M.J. Murphy and D.M. D'Alessandro, "Untangling Complex Redox Chemistry in Zeolytic Imidazolate Frameworks Using Fourier Transformed Alternating Current Voltammetry," **2017**, 89, 10181-10187.
15. H.-Y. Wang, J.-Y. Ge, C. Hua, C.-Q. Jiao, Y. Wu, C.F. Leong, D.M. D'Alessandro, T. Liu and J.-L. Zuo, "Photo- and Electronically-Switchable Spin Crossover Iron(II) Metal-Organic Frameworks Based on a Tetrathiafulvalene Ligand," *Angew. Chem. Int. Ed.*, **2017**, 56(20), 5465-5470.
16. M.B. Solomon, T.L. Church and D.M. D'Alessandro, "Perspectives on Metal-Organic Frameworks with Intrinsic Electrocatalytic Activity," *CrystEngComm*, **2017**, 19, 4049-4065. {**Front Cover, Invited contribution** in special edition on MOFs for Catalysis}
17. L. Cui, J.-Y. Ge, C.F. Leong, D.M. D'Alessandro and J.-L. Zuo, "A heterometallic ferrimagnet based on the new TTF-bis(oxamato) ligand," submitted to *Dalton Trans*, **2017**, 46, 3980-3988.

18. C.J. Kingsbury, B.F. Abrahams, D.M. D'Alessandro, T.A. Hudson, R. Murase, R. Robson and K. F. White, "The role of NEt_4^+ in orienting and locking together $[\text{M}_2\text{lig}_3]^{2-}$ (6,3) sheets (H_2lig = chloranilic or fluoranilic acid) to generate spacious channels perpendicular to the sheets," *Cryst. Growth Des.*, **2017**, 17(4), 1465-1470.
19. C. Hua, J.-Y. Ge, F. Tuna, D. Collison, J.-L. Zuo and D.M. D'Alessandro, "Redox State Manipulation of a Tris(*p*-tetrazolylphenyl)amine Ligand and its Mn^{2+} Coordination Frameworks," *Dalton Trans.*, **2017**, 46, 2998-3007.
20. C. Hua, F. Tuna, D. Collison and D.M. D'Alessandro, "In situ Spectroelectrochemical Investigations of Ru(II) Complexes with Bispyrazolyl Methane Triarylamine Ligands," *Aust. J. Chem.*, **2017**, 70(5), 546-555. {Invited contribution in special edition to commemorate the 70th Birthday of Em./Prof. Len Lindoy}
21. R.D. Arrua, A. Peristy, P.N. Nesterenko, A. Das, D.M. D'Alessandro and E.F. Hilder, "UiO-66@SiO₂ core-shell microparticles as stationary phases for the separation of small organic molecules," *Analyst*, **2017**, 142, 517-524.
22. C. Hua, F. Rizzuto, X. Zhang, F. Tuna, D. Collison and D.M. D'Alessandro, "Spectroelectrochemical Properties of a Ru(II) Complex with a Thiazolo[5,4-d]Thiazole Triarylamine Ligand," *New J. Chem.*, **2016**, 41, 108-114.
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