

Daniel T. Sun

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EDUCATION

2015 – 2019	Ph.D in Chemistry and Chemical Engineering École polytechnique fédérale de Lausanne Valais Wallais, Sion, Switzerland Prof. Wendy L. Queen – Research Advisor
2009 – 2013	B.S. in Chemistry, Minor in Biochemistry, ACS Certified Loyola Marymount University, Los Angeles, CA Prof. Jeremy McCallum and Prof. Emily Jarvis – Research Advisors

EMPLOYMENT HISTORY

2013 – 2015	Research Assistant Lawrence Berkeley National Laboratory, Principal Investigator – Wendy L. Queen and David K. Britt
Summer 2012	Rains Research Assistant Loyola Marymount University, Prof. Jeremy McCallum
2011 – 2013	Organic Chemistry Tutor Loyola Marymount University, Academic Resource Center
2011 – 2013	Organic Chemistry Laboratory Teaching Assistant Loyola Marymount University, Department of Chemistry and Biochemistry
2011 – 2013	Shipping and Receiving Loyola Marymount University, Distribution Center
2011	Media and Reserve Student Worker Loyola Marymount University, Hannon Library

AWARDS AND SCHOLARSHIPS

2019	SNSF/Innosuisse Bridge Proof of Concept Grant
2019	Tech4Impact Play Grant
2019	Swiss Nanotechnology Ph.D Award
2018	MERCK 350 Innovation Research Grant Winner
2018	Swiss Academy of Sciences and Swiss Chemical Society Travel Award
2017	Best Poster Prize – International Symposium on Composites of Metal-Organic Frameworks
2012	McNair Scholars Program - Ronald E. McNair Postbaccalaureate Achievement Program
2012	Loyola Marymount University O'Malley Scholarship

PEER-REVIEWED MANUSCRIPTS

1. “Rapid, Selective Heavy Metal Removal from Water by a Metal-organic Framework /Polydopamine Composite”, **D. T. Sun**, L. Peng, W. S. Reeder, S. M. Moosavi, D. Tiana, D. K. Britt, E. Oveisi, W. L. Queen, *ACS Cent. Sci.*, 2018, 4 (3), 349-356. **Featured Front Cover Article. Featured in RTS News.** Patent Application Ser. No: PCT/US2017/028865.
2. Rapid, Selective Extraction of Trace Amounts of Gold from Complex Water Mixtures with a MOF/Polymer Composite”, **D. T. Sun**, N. Gasilova, S. Yang, E. Oveisi, W. L. Queen, *J. Am. Chem. Soc.*, 2018, 140, 16697. **ACS Editors Choice. Featured in C&E and RTS News.** Patent Application Ser. No: 62/547,988 US
3. “Evaluation of materials for iodine and technetium immobilization through sorption and redox-driven processes”, C. Pearce, **D. T. Sun** et al., *Science of the Total Environment*, 2020, ASAP.
4. “Efficient reductive amination of HMF with well dispersed Pd nanoparticles immobilized in a porous MOF/polymer composite”, V. V. Karve, **D. T. Sun**, O. Trukhina, S. Yang, E. Oveisi, J. Luterbacher, W. L. Queen, *Green Chem.*, 2020, 22, 368 – 378.

5. "Mystical Material Might Help Solve Global Energy Problems", **D. T. Sun** and W. L. Queen, *ACS Cent. Sci.*, 2019, 5, 8, 1307-1309.
6. "A new post-synthetic polymerization strategy makes metal-organic frameworks more stable", S. Yang, L. Peng, **D. T. Sun**, M. Agari, E. Oveisi, O. Trukhina, S. Bulut, A. Jamali, W. L. Queen, *Chem. Sci.*, 2019, 10, 4542 – 4549.
7. "MOF/polymer composite synthesized using a double solvent method offers enhanced water and CO₂ adsorption properties" L. Peng, S. Yang, **D. T. Sun**, M. Asgari, W. L. Queen, *Chem. Commun.* 2018, 54, 10602.
8. "A metal-organic framework derived Co₃S₄ hollow nanobox for the selective reduction of nitroarenes" S. Yang, L. Peng, **D. T. Sun**, E. Oveisi, S. Bulut, and W. L. Queen, *ChemSusChem* 2018, 11, 3131.
9. "MOF-Derived Cobalt Phosphide/Carbon Nanocubes for Selective Hydrogenation of Nitroarenes to Anilines" Shuliang Yang, Li Peng, Emad Oveisi, Safak Bulut, **Daniel T. Sun**, Mehrdad Asgari, Olga Trukhina, Wendy L. Queen, *Chem. Eur. J.*, 2018, 24, 4234-4238
10. "Using predefined M₃(μ₃-O) clusters as building blocks for an isostructural series of metal-organic frameworks" L. Peng, M. Asgari, P. Mieville, P. Schouwink, S. Bulut, **Daniel T. Sun**, Z. Zhou, P. Pattison, W. vanBeek, and W. L. Queen, 2017, *ACS Appl. Mater. Interfaces*. 2017, 9, 23957
11. "Understanding the formation mechanism of metal nanocrystal@MOF-74 hybrids", I. Luz, A. Loiudice, **D. T. Sun**, W. L. Queen, R. Buonsanti. *Chem. Mater.*, 2016 (11), 3839
12. "Transparent and Robust Metal-Organic Framework/Polymer Mixed Matrix Membranes as Water Vapor Barriers", Y. J. Bae, E. S. Cho, F. Qiu, **D. T. Sun**, T. E. Williams, J. J. Urban, W. L. Queen, *ACS Appl Material Interfaces*, 2016, 8, 10098 U.S. Patent Application Ser. No: 62/485,241.
13. "Enhanced Permeation Arising from Dual Transport Pathways in Hybrid Polymer-MOF Membranes", N. C. Su, **D. T. Sun**, C. M. Beavers, D. K. Britt, W. L. Queen, J. J. Urban, *Energy Environ. Sci.*, 2016, 9, 922 (featured cover article). U.S. Patent Application Ser. No: 62/417,954
14. "Multifunctional Purification and Sensing of Toxic Hydride Gases by CuBTC Metal-Organic Framework" Gregory W. Peterson, David K. Britt, **Daniel T. Sun**, John J. Mahle, Matthew Browe, Tyler Demasky, Shirmonda Smith, Amanda Jenkin and Joseph A. Rossin. *Ind. Eng. Chem. Res.*, 2015, 54 (14).

RESEARCH PRESENTATIONS

October 2019	Invited 1 hour Oral Presentation Seminar (Los Angeles, CA) Loyola Marymount University, Department of Chemistry and Biochemistry The Clean Water Initiative
October 2019	Invited Lecture to McNair Scholars (Los Angeles, CA) Loyola Marymount University, Department of Chemistry and Biochemistry From Humble Beginnings to the Clean Water Initiative
September 2019	Swiss Chemical Society Fall Meeting (Zurich, Switzerland) Postal Presentation Design of Porous Composites for Selective and Enhanced Chemical Separations in Aqueous Media
December 2018	MOF Conference 2018 (Auckland, New Zealand) Oral Presentation Design of Porous Composites for Selective and Enhanced Chemical Separations in Aqueous and Aerial Media
November 2017	2 nd EuroMOF 2017 (Delft, Amsterdam) Poster Presentation Design of Porous Composites for Environmental Applications

September 2017	International Symposium on Composites of Metal and Covalent Organic Frameworks: Fundamental Design & Applications (Granada, Spain) Poster Presentation (Best Poster Prize) Design of Porous Composites for Environmental Applications
November 2014	Loyola Marymount University, Department of Chemistry and Biochemistry (Los Angeles, CA USA) Invited 1 hour Oral Presentation Tuning Metal-Organic Frameworks
April 2013	McNair Scholars Program (Los Angeles, CA USA) Oral Research Proposal Synthesis of Surface-Induced Aromatic Stabilized Charged and Metallic Molecules
March 2013	Loyola Marymount University Undergraduate Research Symposium (Los Angeles, CA USA) Poster Presentation Investigation into Photosensitized Oxidation of Indole Derivatives
February 2013	McNair Scholar Program (Los Angeles, CA USA) Oral Presentation Investigation into Photosensitized Oxidation of Indole Derivatives
November 2012	Southern California Conference for Undergraduate Research (Malibu, CA USA) Poster Presentation Investigation into Photosensitized Oxidation of Indole Derivatives Prof. Jeremy McCallum and Prof. Emily Jarvis – Research Advisors