

Kyle E. Cordova

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PROFESSIONAL INTERESTS:

Global development; global innovation; STEM education; research capacity building; reticular chemistry; materials, solid-state, inorganic, and organic chemistry; synthesis of metal-organic frameworks and zeolitic imidazolate frameworks; carbon dioxide capture and conversion to fuels; hydrogen and methane storage; water harvesting from air; gas separations and adsorption; heterogeneous catalysis; sequence-dependent chemical structures.

EDUCATION AND EMPLOYMENT:

2006-2010 B.A., Chemistry and Political Science, *Cum Laude*, University of San Diego
2010-2012 M.Sc., Chemistry, University of California, Los Angeles
2012-2014 Adjunct Faculty, Department of Chemistry and Biochemistry, San Francisco State University
2013-2014 Adjunct Faculty, Department of Chemistry and Biochemistry, University of San Francisco
2014-2016 Global Science Coordinator, Berkeley Global Science Institute, University of California, Berkeley
2014- Research Affiliate, Lawrence Berkeley National Laboratory, Berkeley
2014- Research Associate, Department of Chemistry, University of California, Berkeley
2016- Associate Director, Berkeley Global Science Institute, University of California, Berkeley

GLOBAL SCIENCE INITIATIVES

2011-2012 Visiting Scholar, Center for Reticular Materials, National Institute for Materials Science, Tsukuba, Japan
2011-2012 Visiting Scholar, Heterogeneity within Order Group, KAIST, Daejeon, South Korea
2014-2016 Director of Research, Center for Molecular and NanoArchitectures, Ho Chi Minh, Vietnam
2016- Research Consultant, Saudi Aramco Carbon Capture and Utilization Group, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia
2016- Researcher, Center of Excellence for Nanomaterials for Clean Energy Applications, King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia
2017 Visiting Professor, Bandung Institute of Technology, Bandung, Indonesia
2017- Research Advisor, Foundry of Reticular Materials for Sustainability, University of Putra Malaysia, Putrajaya, Malaysia

MENTORING, PUBLICATIONS, CITATIONS AND INVITED PRESENTATIONS

- **Mentoring.** Research mentor to >200 Ph.D., M.Sc., B.A. students, and Ph.D.-holding research scholars at global science centers in Vietnam, Saudi Arabia, South Korea, Japan, China, Malaysia, Indonesia, and Jordan.
- **Publications.** Authored over 30 articles in peer-reviewed journals. 5 published in *Science* and *Nature* family journals.
- **Citations.** Over 6,700 citations garnered for published articles. H-index of 18 and i10-index of 24 (Google Scholar Data).
- **Invited Presentations and Workshops Disseminated.** Over 25 invited presentations and 30 workshops delivered worldwide.

PROFESSIONAL ACTIVITIES

2014 Executive Organizing Committee, "150 Years of Beautiful Structures and Defects," Ho Chi Minh City, Vietnam
2016- Principle Director and Coordinator of the Berkeley Emerging Scholars Research Scholars: Laboratory Research Experience Program; globalscience.berkeley.edu/lre

- 2016 Invited Participant, 2nd Steering Committee, “World Science Forum 2017,” Royal Scientific Society, Amman, Jordan
- 2017 Sub-Committee on Emerging Scholars/Young Scientists, “World Science Forum 2017,” Amman, Jordan
- 2017 Executive Organizing Committee, “Kavli Futures Symposium on Fostering Global NanoScience Research,” Berkeley, CA, USA
- 2018 International Advisory Committee, “2nd Symposium on Organic and Inorganic Chemistry, Southern Africa,” University of Botswana, Gaborone, Botswana
- 2018 Invited Member of the Global Energy Prize Pool of International Experts (Russian Federation)
- 2018 Invited External Reviewer for Deutsche Forschungsgemeinschaft (German Research Foundation)
- 2019 Executive Organizing Committee, “Frontiers in Chemical Research,” National Autonomous University of Mexico, Mexico City, Mexico

SELECTED RESEARCH PUBLICATIONS (country where research performed)

7. Diercks, C. S.; Liu, Y.; **Cordova, K. E.**; Yaghi, O. M. The Role of Reticular Chemistry in the Design of CO₂ Reduction Catalysts. *Nature Mater.*, **2018**, *17*, 301-307. (United States)
6. Trickett, C. A.; Helal, A.; Al-Maythaly, B. A.; Yamani, Z. H.; **Cordova, K. E.**; Yaghi, O. M. The Chemistry of Metal-Organic Frameworks for CO₂ Capture, Regeneration, and Conversion. *Nature Rev. Mater.*, **2017**, *2*, 17045. ****Highlighted on the Front Cover** (Saudi Arabia – United States)
5. Nguyen, H. L.; Gándara, F.; Furukawa, H.; Doan, T. L. H.; **Cordova, K. E.**; Yaghi, O. M. A Titanium-Organic Framework as an Exemplar of Combining the Chemistry of Metal- and Covalent-Organic Frameworks. *J. Am. Chem. Soc.*, **2016**, *138*, 4330-4333. (Vietnam – United States)
4. Nguyen, N. T. T.; Furukawa, H.; Gándara, F.; Trickett, C. A.; Jeong, H.-M., **Cordova, K. E.**; Yaghi, O. M. Three-Dimensional Metal-Catecholate Frameworks and their Ultrahigh Proton Conductivity. *J. Am. Chem. Soc.*, **2015**, *137*, 15394-15397. (Vietnam – United States)
3. Nguyen, N. T. T.; Furukawa, H.; Gándara, F.; Nguyen, H. T.; **Cordova, K. E.**, Yaghi, O. M. Selective Capture of Carbon Dioxide under Humid Conditions by Hydrophobic Chabazite-Type Zeolitic Imidazolate Frameworks. *Angew. Chem. Int. Ed.*, **2014**, *53*, 10645-10648. ****Highlighted on the Back Cover.** (Vietnam – United States)
2. Furukawa, H.; **Cordova, K. E.**; O’Keeffe, M.; Yaghi, O. M. The Chemistry and Applications of Metal-Organic Frameworks. *Science*, **2013**, *341*, 1230444. (United States)
1. Deng, H.; Grunder, S.; **Cordova, K. E.**; Valente, C.; Furukawa, H.; Hmadeh, M.; Gándara, F.; Whalley, A. C.; Liu, Z.; Asahina, S.; Kazumori, H.; O’Keeffe, M.; Terasaki, O.; Stoddart, J. F.; Yaghi, O. M. Large Pore Apertures in a Series of Metal-Organic Frameworks. *Science*, **2012**, *336*, 1018-1023. ****Highlighted in Chemical and Engineering News.** (United States and Japan)

FELLOWSHIPS AND AWARDS

- 2006 University of San Diego Presidential Scholar
- 2007 National Cancer Institute CURE Scholar
- 2009-2010 Ronald E. McNair Scholar
- 2009-2010 Ronald E. McNair Post-Baccalaureate Scholarship Recipient
- 2014 Vietnam National University – Ho Chi Minh Outstanding Achievement Award for best scientific publication in 2013-2014 (Nguyen, N. T. T. *et al*, *Angew. Chem. Int. Ed.*, **2014**, *53*, 10645-10648)