

Mechanical and Aerospace Engineering Seminar

Dr. Mario Wriedt
Kodak CAMP Distinguished Professor
Department of Chemistry and Biomolecular Science
Clarkson University

Will present a talk titled:

New Frontiers in MOFs: From Water Remediation, Electrochromics and Spintronics to COVID-19 Testing

Abstract: Metal-organic frameworks (MOFs) are crystalline porous materials composed of metal clusters or ions connected by polytopic organic linkers. Their framework structures, pore environment, and functionality make them uniquely tunable by the choice and connection of metal and organic building blocks, allowing the design of innovative materials with customized properties.

Our research programs all address interrelated fundamental aspects of the design, synthesis, and characterization of functional MOF materials. This presentation is a comprehensive overview on how systematic investigations of important structure-property relationships will pave the way for new developments in advanced materials for electro- and photochromic switches, stimuli-responsive spintronics, water remediation and COVID-19 testing.

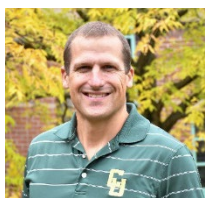
Date: September 16, 2022

Location: CAMP 176

Time: 11:00 am

Zoom Link:

<https://clarkson.zoom.us/j/99234191973?pwd=MkcvMlZKYW85cWZrN0FOM3lTc3VxQT09>



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Bio: Dr. Wriedt obtained his Ph.D. from Kiel University, Germany in 2010 under the supervision of Christian Näther, working in the field of magnetic framework materials. Following 2.5-year postdoctoral assignment at Texas A&M University in Hong-Cai Zhou's group he focused his research on metal-organic frameworks with tunable physical properties. Since 2013, Dr.

Wriedt has conducted independent research at Clarkson University in Potsdam, NY. Currently, he holds the rank of Distinguished Professor of Chemistry, and his research is focused on the design and elucidation of structure-property relationships of novel functional solid-state materials which have the potential to advance the development of energy, environmental and medicinal applications. His early work has been recognized by a Doctoral New Investigator Award of ACS PRF and a Faculty Early CAREER Award of NSF with representative examples of his work featured on the covers of the Journal of the American Chemical Society, Dalton Transaction, and CrystEngComm. To date, Dr. Wriedt has authored 88 research papers published in peer-reviewed journals, was awarded two patents, and received >\$2.2M in research funding.