Richard R. Lunt is an Assistant Professor at Michigan State University where his group focuses on understanding and exploiting excitonic photophysics and molecular crystal growth to develop unique thin-film optoelectronic devices. He earned his B.ChE. with Honors and Distinction from the University of Delaware in 2004 and his Ph.D. in Chemical Engineering from Princeton University in 2010. He then worked as a post-doctoral researcher at MIT until 2011. His work has been featured in *Nature*, *NY Times*, *Huffington Post*, *CNN*, *CBS*, and *NBC News*, among others, and his innovative research has earned him a number of prestigious awards including the NSF CAREER Award, the Camille and Henry Dreyfus Mentor Award in Environmental Chemistry, the DuPont Young Investigator Award, and the GPEC Solar Innovation Award. He is the inventor of over 15 patents, the majority of which have been licensed, and recently won the Innovation of Year Award at MSU. He is also a founder of Ubiquitous Energy Inc., which is commercializing a range of seamless light-harvesting technologies.

**Unique Opportunities for Excitonic Photovoltaics and Solar Concentrators or: How I Learned to Stop Worrying and Love the Exciton**

Room-temperature excitonic materials offer new opportunities for low-cost photovoltaic (PV) systems and provide prospects for unique solar harvesting science and applications. In this talk, I will introduce our pioneering work on developing transparent PV and solar concentrator materials that are creating new paradigms for building integrated solar harvesting and autonomous mobile electronics. These devices are specifically enabled by the manipulation of excitonic semiconductor materials and inorganic nanoclusters with selective and tuneable harvesting in the near-infrared and ultraviolet components of the solar spectrum. I will describe the development of key photophysical properties, outline the thermodynamic and practical limits to these new classes of materials and devices, and discuss their commercialization for a range of applications.

(Left) Chemical structures for a range of excitonic and nanocluster semiconductors
(Right) A 12-cell series-integrated transparent photovoltaic