

# REU Site: Tackling Some of the Grand Challenges for Engineering

## *Final Presentations*

August 3, 2012

8:00 am – 12:30 PM; POTR 122

<b>Title [time]</b>	<b>Researcher</b>	<b>Faculty Advisor</b>
Modeling Spectral Irradiance for a Solar Ultraviolet Water Disinfection System [8:00 – 8:25]	Kyle Fuller, Loyola Marymount University	Ernest C. Blatchley
Cesium Ion Adsorption to Concrete and the Components for Electrokinetic Remediation of Concrete. [8:25 – 8:50]	Seth Cory, Clarke University	Michael T. Harris
Photolysis of Phenanthrene in Paraffin Wax Films [8:50 – 9:15]	Emily Toffol, University of Arizona, Tucson	Inez Hua
Mapping Irradiance in a Compound Parabolic Collector for use in Water Disinfection [9:15 – 9:40]	Ruth Chadwick, Gordon College	Ernest C. Blatchley
Evaluating the Power Consumption of DX Air Conditioners in Residential Buildings Using a Semi-Empirical Inverse Model [9:40 – 10:05]	John Matos Ramos, University of Puerto Rico-Mayaguez	Travis Harton
<b>Break</b>		
Greenhouse Gas to Commodity Chemical: Nano-Particle Forming Carbon Dioxide Scrubber [10:25 – 10:50]	Winston Black III, University of Dayton	Michael T. Harris
Saving Dinosaurs from Combustion One Gallon of Biofuel at a Time [10:50-11:15]	Colleen Gardina, University of Maryland, Baltimore County	Jeffery Volenec
Re-thinking Coastal Urban Infrastructure with Respect the Effects of Sea-level Rise [11:15-11:40]	Ebony Lemons, University of Tennessee	Loring Nies
A Comparison of Water Quality Along an Agricultural and an Urban Stream Draining into the Wabash River [11:40-12:05]	Mitchell Heuermann, Monmouth College	Ronald Turco
Iron Ore to Steel: How Much Water Does it Take?	Edward Kluender, Gustavus Adolphus	Fu Zhao and John