

**2006 NSF-REU SYMPOSIUM
POSTER PRESENTATIONS
August 3, 2006
Kent Student Center – Rooms 306 ABC & 307**

Amy Wirtz	Kent State University & Westminster College	Two Pieces of the Fuel Cell Puzzle: The Catalyst and the Membrane
Nebiyu Abiy	Kent State University	Studying the Phase Transition Properties of Poly(N- isopropylacrylamide) by the Radiation Pressure of a Focused Laser Beam
Melissa Zwilling	The University of Akron & John Carroll University	Origin of Surface Ordered Phase in Poly(n-alkyl acrylates)
Katherine Williams	Case Western Reserve University & The Pennsylvania State University	The Effects of Cross-linking Agents on the Specific Conductivity and Optical Transparency of Poly(3,4- ethylenedioxythiophene)
Tsemre-Dengil Tessema	Kent State University	Electro Optical Properties of Porphyrin Mixtures
Brittany Austin	The University of Akron & Lycoming College	Synthesis of 1→3 Branched Poly-Urea Newkome-type Dendrons and Dendrimers
Eric Arndt	Case Western Reserve University	Elastomeric Polymer/Clay Aerogel Composites
Travis Adams	Kent State University & Lipscomb University	Quantum Amplification: An Experimental Demonstration of a Stimulated Polarization Wave
Tiffany Guo	NASA Glenn Research Center & Massachusetts Inst. of Tech.	Metal Oxide Nanotubes for the Development of Chemical Gas Sensors
Steven Vesole	Case Western Reserve University	Hydrogels of de Novo Designed Amphiphilic Peptides

Jennifer L. Steele	Kent State University & Westminister College, PA	The Synthesis and Characterization of Copper, Silver and Gold Guanidinate Complexes
Keith Pelletier	The University of Akron & Western Illinois University	Glass as a Defective Crystal
Gregory Conen	Case Western Reserve University	Applications of Multilayered Photonic Crystals
Shane Burgan	The University of Akron & The University of Texas at Austin	Synthesis of Poly(isobutene) – Clay Nanocomposites
Stephanie Trittschuh	Case Western Reserve University	Electrosprayed Coatings for Drug-Eluting Stents
Kerri Shelton	Kent State University & Miami University	Synthesis of Broad Temperature Blue Phase Liquid Crystals
Kathryn Johnson	NASA Glenn Research Center & University of South Carolina	Synthesis of Robust Silica Aerogels via One-Pot and Two-Pot Processes
Katherine Finlay	Case Western Reserve University	Disbursement of Natural Fibers in Na-Montmorillinite Clay Aerogels
Shamere Ashley	Kent State University	Analysis of Phosphoinositide Behavior using FRET and GUVs
Allia Kaye Lindsay	The University of Akron & Agnes Scott College	Reinforcement of Polystyrene-b-Polyisobutylene-b-Polystyrene (SIBS) Biomaterials by Hydrogen Bonding
Dyron Stephens	Case Western Reserve University & Fisk University	Accelerated Degradation of Biodegradable Polymers through Hydrolysis for Potential Medical Applications
Joseph Schultz	Kent State University	Transfer Bromination, Transfer Alkylation, and Hydrosilation in Ionic Liquid Solvents
Rudy Wojtecki	NASA Glenn Research Center & Hiram College	Photo Generation of High Performance Polymers

Brett Spigarelli	Case Western Reserve University & Michigan Technological University	Dispersion and Dissolution Studies of Particle Agglomerates
Elaine Augustin	Kent State University & Providence College	A New Class of Chromonic Liquid Crystals
Dan Dreyer	The University of Akron & Wheaton College	Determination of Cross-Linking in Plasma-Polymerized Films
Josh Gibson	Case Western Reserve University & University of Central Oklahoma	Performance of Sulfonated Poly-Ether Sulfone as a H ₂ O Conductor
Jeffrey Bertke	Kent State University	Synthesis and Characterization of a Series of Novel Lanthanide Guanidinate Complexes
Davoy Murray	The University of Akron & Albany State University	Induction of Smectic Layering in Nematic Liquid Crystals using π - π Interactions between Aromatic Hydrocarbons and Aromatic Fluorocarbons
Jane Lindborg	Case Western Reserve University & The University of Puget Sound	Toward Guanosine-based Hydrogels for Wound Healing Applications
Thomas Fai	Kent State University & University of Michigan	Numerical Studies of Configurational Instabilities in Liquid Crystal Cells
Eric Giles	Case Western Reserve University	Photoetching of CdSe Nanoparticles with 2,6-(1'-Methylbenzimidazolyl)-4-pyridine (Mebip) Derivatives
William Minton	NASA Glenn Research Center & Carnegie Mellon University	Synthesis and Characterization of Photomechanical Polymers
Kendra Shook	Case Western Reserve University & Youngstown State University	Optimization of Proton Conducting Membranes for High Temperature Hydrogen/Air Fuel Cells
Lo'Rell Martin	Kent State University	Systematic Injections of ICI 182,780 May Have Estrogenic Effects on the Development of the Zebra Finch <i>Syrinx</i>

Megan A. Lang	The University of Akron & Grove City College	Photopolymerization of Silver-filled Acrylate Systems
J. Casey Johnson	Case Western Reserve University	Towards Complex Polymer Architectures
Justin B. W. Peeples	Kent State University	Synthesis and Characterization of a Series of Novel Mn, Fe and Co Metalloenzyme Model Complexes
Rebecca King	The University of Akron & Morehead State University	Anionic Synthesis and Functionalization of Poly(styryl)lithium with Dimethylchlorosilane Followed by Hydrosilation with Vinyl Trimethoxysilane
Patrick Shively	Case Western Reserve University	Refractive Index Behavior in Multilayer Films with Sharp and Diffuse Interfaces
Victoria Cunningham	Kent State University	Atmospheric Nucleation in Kent, Ohio
Megan Warner	NASA Glenn Research Center & Denison University	Kinetic Measurements for the Diels-Alder Trapping of Bis(<i>o</i> -methylbenzophenones) with Maleimides
Paul Yanzer	Case Western Reserve University & University of Wisconsin Eau Claire	Sulfonated Polyethersulfone Membranes for Fuel Cells
Juan Morinelly	The University of Akron & Michigan Technological University	Onsets of Tethered Chain Overcrowding and Highly Stretched Regimes of Polymer Brushes
Nora Sennett	Case Western Reserve University & Columbia University	Biocompatible Amphiphilic POSS Polymers
Callie Croushore	Kent State University & Westminster College	Binding Preference for PTEN's N-Terminal End
Jessica Knoll	Case Western Reserve University & University of Dayton	Fluorescent Organometallic Sensors for the Detection of Organophosphates and Amines

Roberto Chavez	Kent State University	A High-Resolution Microwave Study and Structure Determination of 2-hexanol
Vince Kowalski	Kent State University	Synthesis of DCDHF Chromophores
Keith R. Miller	The University of Akron & Mount Union College	Synthesis of ATRP Initiator Immobilized Silver Nanoparticles
Saturah Martin	Case Western Reserve University & Fisk University	Multi-layered Mirrors Fabricated by Spin-coating Polymers
Jeremy Williams	Kent State University	Synthesis of Low-Humidity Proton Conducting Polymer Membranes
Joseph Holt	The University of Akron & Georgia Institute of Technology	Design and Calibration of an Instrument for Sensing Friction Forces, Adhesion Energies, and Surface Specific Spectroscopy
Matthew C. Hagy	Case Western Reserve University	Computer Modeling of Multivalent Binding/Recognition
Houda Ougaddoum	Kent State University & Al Akhawayn Univ. in Ifrane	Dimer DCDHF Fluorophores
Timothy K. Lane	NASA Glenn Research Center & Gettysburg College	Synthesis of Anthracene Dianhydride Derivatives
Kevin Lamison	Case Western Reserve University	The Effect of Molecular Weight in Poly(vinyl alcohol) Clay Aerogel Composites