

PAPER & CHEMICAL ENGINEERING
Scholarship Activities 2006

Peer-Reviewed Journal Articles

D. W. Coffin, L. A. Carlsson and R. B. Pipes, "On the Separation of Carbon Nanotubes Composites *Science and Technology* 66:1129-1137 (2006).

V. Kumar, N. Lee, and **C. L. Bothe Almquist** (2006). The catalytic oxidation of methanol over nanostructured $WO_3/V_2O_5/TiO_2$ catalysts prepared by 2 different methods. *Applied Catalysis B: Environmental*, 69 pp. 101-114.

Wu Bi and **Douglas W. Coffin**, "Racking Strength of Paperboard Based Sheathing Materials," *BioResources*, 2(1);6-13 (2007)

I. L. Repins, B. J. Stanbery, D. L. Young, S. S. Li, W. K. Metzger, C. L. Perkins, W. N. Shafarman, M. E. Beck, L. Chen, V. K. Kapur, D. Tarrant, M. D. Gonzalez, D. G. Jensen, T. J. Anderson, X. Wang, **L. L. Kerr**, B. Keyes, S. Asher, A. Delahoy, B. Von Roedern, "Comparison of device performance and measured transport parameters in widely-varying Cu(In,Ga) (Se,S) solar cells," *Progress in Photovoltaics: Research and Applications*, Vol. 14, Issue 1, 2006. Pages 25-43.

Mondal, K., and **S. B. Lalvani**, "Copper-Platinum Deposition by Pulse Plating," *Journal of Electrochemical Society*, 153, 6, 393-399, 2006.

M. E. Thrash, N. G. Pinto, "Incorporating water-release and lateral protein interactions in modeling equilibrium adsorption for ion-exchange chromatography", *Journal of Chromatography, A* 1126 (1-2): 304-310 Sept. 8, 2006.

M. H. Waller, "Upsets in Papermaking Ash Control: Various Dead-Time Compensators," *Tappi J.* 5(10):17-20 (2006).

Refereed proceedings

R. E. Popil, **D. W. Coffin**, C. C. Habeger, "Transverse shear measurement for corrugated board and its significance," Accepted for *2007 International Paper Physics Conference*.

R. K. Maharajan, B. R. Mulaka, and **D. W. Coffin**, "Paper wrinkling arising from the application and drying of water-based inks," Accepted for *2007 International Paper Physics Conference*.

Rong Zhang, **Lei Kerr**, Richard E. Edelmann, Marina Canepa, and Andre J. Sommer, "Flower-like Nano-structured ZnO for Dye-sensitized Solar Cells," *Proceeding of the 2006 IEEE 4th World Conference on Photovoltaic Energy Conversion*, pp. 267-270, 2006.

External Research Grants Awarded

Cathy Almquist, "Phase II Construction and Testing of Surface Corona Discharge-Catalytic Reactor for Oxidative Treatment of Waste Gas Emissions from the Pulp and Paper Industry", US EPA, \$69, 420.

Lei Kerr, "Quantum Dots Solar Cells" ASSE NASA Summer faculty fellowship, \$13,700.

M H. Waller, From ControlLab, B.V., and The University of Twente, Netherlands, site license for 20SIM202 computer software annually until 01 Jan 2020. Classroom kit: \$1662.50.

Cathy Almquist, "Development of a Website for Solar Energy Utilization for Residential Use, Buckeye Power", \$1,000.

Internal Research Grants Awarded

Doug Coffin (PI), **Lei Kerr** and Yulong Pan, (2006) Shoupp Award "Scale-up of Web-fed Electrospinning" \$8,000.

Lei Kerr (PI) and Andre Sommer, Community Faculty Research: "Raman Analysis of Nitrogen doped ZnO" (\$6,200 summer salary+\$2,960 equipment and supply +Research Graduate Assistantship \$23,888)

Theses and Practicum completed

Bharath Kumar, (Advisor: Dr. Coffin), "Forming nanofibers and fused nanofiber networks using the electrospinning method"

Benjamin Ong, (Advisor: Dr. Coffin), "Racking strength of paperboard based sheathing materials"