

## PAPER & CHEMICAL ENGINEERING

Scholarship Activities 2005

### Peer-Reviewed Journal Articles

**D. W. Coffin** and B. Hojjatie, "Application of shadow moiré method in measurement of sheet topography," Accepted by *Tappi Journal* (2005). (0.369, 12/18, 50%)

**D. W. Coffin**, Acknowledgement for contribution in: Carlsson L and Lindstrom T, "A shear-lag approach to the tensile strength of paper," *Composites Science and Technology* 65 (2005) 183-189.

**M.H. Waller**, "Disturbing Performance: Control system software can cure paper machine upsets," *DeltaTech*, 52:8, 19-21 (2005).

**M.H. Waller**, "Simulation with Process Control Software for Disturbance Rejection in the Wet End of a Paper Machine: Part II," from ISA Expo 2005 Conference, Training and Exhibition, Paper No. ISA05-P025, *ISA Emerging Technologies*, (ISBN TP05ISA157), 455 (2005).

Zhang, R, and **Lalvani, S. B.**, "Comments on the article "Mechanical properties of the paper sheets treated with different polymers" by S. Kamel, M. El-Sakhawy, A.M.A. Nada, Letter to Editor, *Thermochemica Acta* 421 (1-2), 81-85, 2004, *Thermochemica Acta*, 436, 1-2, October, 2005.

Jegadeesan, G., Mondal, K., and **Lalvani, S. B.**, "Selenate Removal from Sulfate Containing Aqueous Solutions," *Environmental Technology*, 26, 10, 1181-1188, 2005.

Jegadeesan, G., Mondal, K., and **Lalvani, S. B.**, "Arsenate Remediation Using Nanosized Modified Zerovalent Iron Particles, *Environmental Progress*, 24, 3, 289-296, 2005.

Wiltowski, T., Piotrowski, K., Lorethova, H., Stonawski, L., Mondal, K., and **Lalvani, S. B.**, "Neural Network Approximation of Iron Oxide Reduction Process," *Chemical Engineering and Processing*, 44, 775-783, 2005.

Mondal, K., Sathitsuksanoh, N., and **Lalvani, S. B.**, "Electrodeposition and Characterization of Films of CoP," *Plating and Surface Finishing*, 92(1), 42-44, January 2005.

Jegadeesan, G. Mondal, K., and **Lalvani, S. B.**, "Iron Removal and Simultaneous Regeneration of Hexavalent Chromium in Spent Plating Solutions," *Journal of the Electrochemical Society*, 152(2), D26-33, 2005.

### External Research Grants Awarded

**C.L.B. Almquist**, \$50,000, US EPA. Investigation for use of a surface corona discharge catalytic reactor for partial and deep oxidation of waste gas emissions from the pulp and paper industry.”

**D. W. Coffin**, Investigation of the Desirable Properties of Paper needed for Ink Jet Printing, **Kodak Versamark**, PI, \$41,079. (with M. Sikora)

### **Internal Research Grants Awarded**

**L. Kerr**, Shoupp Award, “Thermal Conductivity of Paper Coating.” (\$6,000)

### **Theses and Practicum completed**

Neeraj Sharma (Thesis Advisor: Dr. Sikora): “Use of Ultrasound to Predict InkJet Print Quality”

Brahmananda Reddy Mulaka (Thesis Advisor: Dr. Coffin): “Development of a Method to Evaluate Wrinkling Tendency of InkJet Papers”

Bartlomiej Wojas (Practicum Advisor: Dr. Almquist) “Characterization and Comparison of Ambient Aerosol Air of Oxford, Ohio in Determination of NAAQA Compliance with Respect to PM2.5”

### **Undergraduate Summer Scholarships**

Matthew Denney (Advisor: Dr. Lei Kerr) “Development of Transparent Flexible Substrate for Solar Cell Applications”

Michael Reimer (Advisor: Dr. Coffin) “Understanding Mechanical Behavior of Paper: Creep Testing”

