

Award Amount	PI/Sponsor/Title	Project Period
\$363,636.00	N.A. Peppas National Science Foundation Polymer/Mucin Adhesion for Targeted Therapy	09/97-01/99
\$163,339.00	N.A. Peppas National Institute of Health Peg-promoted Mucoadhesive Drug Delivery Systems	08/97-08/98
\$29,000.00	N.A. Peppas Alcon Laboratories Polymerization Technologies	07/97-09/99
\$25,400.00	N.A. Peppas Trask Trust Fund Method for Oral Delivery of Insulin	08/97-09/98
\$315,000.00	F.J. Doyle + 250,000 (in kind) J.F. Pekny G.V. Reklaitis V. Venkatasubramanian Computer Integrated Process Operations Center Individually Supported	05/96-09/99
\$284,839.00	G.V. Reklaitis Shell Companies Foundation, Inc. Shell Oil Company Foundation Fellowship	09/85-08/98
\$60,000.00	G.V. Reklaitis E.I. DuPont de Nemours & Company E.I. DuPont de Nemours & Company Fellowship	09/81-09/97
\$347,711.00	G.V. Reklaitis U.S. Department of Education Purdue Program for Graduate Assistance in Chemical Engineering Areas of National Need	09/97-08/99
\$117,991.00	G.V. Reklaitis C.D. McAllister Endowment Goddard Fellowship	06/90-09/99
\$314,725.00	G.V. Reklaitis National Consortium Graduate Minorities Engineering and Science National Consortium for Minorities Fellowship	09/92-09/98
\$69,438.00	G.V. Reklaitis G.V Oak Ridge Associated Universities Computational Science Graduate Fellowship Program	09/92-08/97
\$60,551.00	G.V. Reklaitis USDA Developing Environmentally and Economically Sustainable Food Processing Systems	09/95-09/98

Award Amount	PI/Sponsor/Title	Project Period
\$213,600.00	E.M. Sevick-Muraca National Science Foundation National Young Investigator Biomedical Optical Imaging	09/94-09/98
\$507,162.00	E.M. Sevick-Muraca Public Health Service N.H. Frequency-Domain Photon Migration Imaging for Breast Cancer Screening	08/94-05/98
\$315,901.00	E.M. Sevick-Muraca Mallinckrodt Medical	08/94-09/98
\$69,952.00	E.M. Sevick-Muraca University of Tennessee Process Monitoring with Measurement of Photon Migration	09/94-09/97
\$285,245.00	E.M. Sevick-Muraca PHS-NIH National Cancer Institute Photon Migration Measurements for Tissue Diagnostics	07/95-07/99
\$60,000.00	E.M. Sevick-Muraca E.I. duPont de Nemours & Co. Process Measurement	09/95-09/99
\$337,328.00	E.M. Sevick-Muraca Public Health Service-NIH Frequency-Domain Lifetime Spectroscopy: A Tissue Phantom Study	09/96-08/98
\$145,335.00	E.M. Sevick-Muraca Army Research Office Fluorescence Lifetime Imaging for Breast Cancer Detection and Diagnostics	07/96-06/98
\$22,363.00	E.M. Sevick-Muraca Eli Lilly & Company Particle Size Research	03/97-09/99
\$29,713.00	J.L. Sinclair National Science Foundation Presidential Young Investigator Award	09/97-02/99
\$93,563.00	J.L. Sinclair Univ. Of Arizona - DOE Optimization of Coal Particle Flow Patterns in Low Nox Burners	10/97-01/00
\$29,713.00	J.L. Sinclair Dow Chemical Company Research Support for Modeling Gas-Solid Flow area	12/97-09/99

Award Amount	PI/Sponsor/Title	Project Period
\$10,000.00	J.L. Sinclair Chevron Research Co. Chevron - Grad Research	12/97-09/99
\$11,666.00	V. Venkatasubramanian Purdue Research Foundation Automated Process Hazards Analysis of Batch Chemical Processing	09/97-09/98
\$110,000.00	V. Venkatasubramanian Honeywell, Inc. A. Hybrid Intelligent System for Real-Time Process Fault Diagnosis	12/95-09/98
\$195,351.00	V. Venkatasubramanian Lubrizol Corporation A Proposal to Develop a Neural Network- Genetic Algorithm Framework for Product Design and Formulation	12/95-12/98
\$300,000.00	V. Venkatasubramanian National Science Foundation Process Systems Tools for the Development and Management of Environmentally and Economically Conscious Manufacturing	09/95-08/98
\$80,000.00	V. Venkatasubramanian G.D. Searle & Company Preclinical Research & Development	05/96-09/99
\$10,000.00	V. Venkatasubramanian Exxon Education Foundation Research in Real-Time Process Assessment	08/96-11/98
\$50,000.00	V. Venkatasubramanian ICI Engineering Technology General Research in Process Safety Area	11/96-09/99
\$17,000.00	N.-H.L. Wang Trask Trust Fund Beta-Site Testing and Further Development of Verse	01/93-07/97
\$22,176.00	N.-H.L. Wang Purdue Research Foundation Design a New Adsorption Process for Removal of Organics from Water and Wastewater	01/96-01/98
\$50,000.00	N.-H.L. Wang Showalter Trust Removal of Toxic Organics from Water and Wastewater	07/95-06/98
\$162,436.00	N.-H.L. Wang Abbott Laboratories Model-based Design, Optimization, and Scale-up of Simulated Moving Bed	08/97-01/99

Award Amount	PI/Sponsor/Title	Project Period
	Chromatography for Antibiotics Recovery and Purification	
\$43,163.00	N.-H.L. Wang GIST-Brocades	05/98-05/99
	Applications & Modifications of Verse for Process Design, Optimization and Scale up.	
\$11,666.00	N.-H.L. Wang Purdue Research Foundation	05/98-05/99
	Thermal Fractionation in Continuous Chromatography	
\$230,717.00	P.C. Wankat National Science Foundation	05/94-04/98
	Multicomponent Adsorption Processes	
\$21,928.00	P.C. Wankat Purdue Research Foundation	09/95-09/97
	Development of Simultaneous Fermentation/Separation from Lactic Acid Production	
\$55,556.00	P.C. Wankat National Science Foundation	09/97-09/99
	New Regeneration Methods for Adsorption	
\$11,666.00	P.C. Wankat Purdue Research Foundation	03/98-03/99
	Latent Heat Regeneration of Adsorbers	

Thesis Projects

Graduate Student Major Professor	Thesis Title	Degree Date Granted
Balasubramhanya, Lalitha <i>Doyle</i>	Low Order Models for Nonlinear Process Control	PhD August 8, 1997
Burgos-Rubio, Concepcion N. <i>Wankat/Okos</i>	Continuous Fermentation of Lactose for Lactic Acid Production by Simultaneous Bioreaction and Product Separation	PhD August 8, 1997
Doakes, Kelley P. <i>Andres</i>	Synthesis of a Metal/Ceramic Membrane for Oxygen Separation	MS August 8, 1997
Kendi, Thomas A. <i>Doyle</i>	Model-Based Control of Constrained Nonlinear Process Systems	PhD August 8, 1997
Kwatra, Harpreet <i>Doyle</i>	Neuro-Mimetic Dynamic Gain Scheduled Process Control	PhD August 8, 1997
Ostrowski, Mark H. <i>Lackritz</i>	Electric Field Effects in Polymer Thin Films for Second Order Nonlinear Optics	PhD August 8, 1997
Tsao, David Teh-Wei <i>Okos/Eckert</i>	Modeling the Environmentally or Biologically Controlled Nutrient Uptake Kinetics into Plants	PhD August 8, 1997
Wilkes, Edward D. <i>Basaran</i>	Finite Element Analysis of Forced Oscillations of Supported Drops	MS August 8, 1997
Byrne, Mark E. <i>Wankat</i>	Pressure Effects in Adiabatic Adsorption and Adsorptive Reactors	MS December 20, 1997
Chai, Lu <i>Basaran</i>	Fluid Mechanics of Distillation	MS December 20, 1997
Chen, Alvin Un-Teh <i>Sevick-Muraca</i>	Effects of Fluorescence and Phosphorescence Lifetime on Frequency Domain Optical Contrast for Biomedical Optical Imaging	MS December 20, 1997
Ernest, Jr., Michael V. <i>Wang</i>	Model-Based Design of Carousel Ion- Exchange Processes	PhD December 20, 1997
Liu, Jia <i>Andres</i>	Fabrication of 2-D and 3-D Nanocluster Networks	MS December 20, 1997
Lopez, Guadiana <i>Sevick-Muraca</i>	Absorption and Fluorescent Contrast Mechanisms for the Detection and Diagnosis of Breast Cancer Using Single- Pixel Frequency-Domain Photon Migration Imaging	MS December 20, 1997
Lowman, Anthony M. <i>Peppas</i>	The Dynamics of Complexation Graft Copolymers: Structural Analysis, NMR Spectroscopy and Their Implication for Biomedical Application	PhD December 20, 1997

Graduate Student Major Professor	Thesis Title	Degree Date Granted
Matthews, Jonathan T. <i>Andres</i>	Design and Characterization of a Distributed Arc Cluster Source for Nanoparticle Synthesis	MS December 20, 1997
Pasmore, Jr., Tom A. <i>Lackritz</i>	The Effects of Polar Dopants in Polymers Subjected to Applied Electric Fields	PhD December 20, 1997
Randall, Daniel R. <i>Lackritz</i>	Monitoring and Analyzing Structural Relaxation Following Temperature Jumps in Doped Polymer Systems Using Second Harmonic Generation	MS December 20, 1997
Shin, Dongil <i>Venkatasubramanian</i>	Intelligent Tutoring System Framework for Operator Training in Process Fault Diagnosis	PhD December 20, 1997
Shrikhande, Prashant <i>Caruthers</i>	Prediction of Deformation and Enthalpy Relaxation for an Amorphous Polymer Using a Thermoviscoelastic Constitutive Model	MS December 20, 1997
Troy, Tamara L. <i>Sevick-Muraca</i>	Biomedical Optical Imaging From Frequency Domain Photon Migration Measurements: Experiments and Image Reconstruction	PhD December 20, 1997
Varner, Jeffrey D. <i>Ramkrishna</i>	Metabolic Engineering from a Cybernetic Perspective. A Conceptual Framework	PhD December 20, 1997
Wajge, Rajesh M. <i>Reklaitis</i>	Campaign Optimization of Multicomponent Reactive Batch Distillation	PhD December 20, 1997
Williams, Christopher T. <i>Takoudis</i>	Surface-Enhanced Raman Spectroscopy as an In-Situ Real-Time Probe of Heterogeneous Catalytic Reactions	PhD December 20, 1997
Wisnewski, Philip A. <i>Doyle</i>	Inferential Control Using High-Order Process Models with Application to a Continuous Pulp Digester	PhD December 20, 1997
Irwin, Nancy C. <i>Greenkorn</i>	Magnetic Resonance Imaging Experiments for the Verification of a Stochastic Transport Theory	PhD May 9, 1998
Keys, Kelley Britton <i>Peppas</i>	Poly(ethylene glycol) Star Polymer Hydrogels	MS May 9, 1998
Kim, Jum Sik <i>Basaran</i>	Effects of an Electric Field on the Deformation and Breakup of a Stretching Liquid Bridge	MS May 9, 1998
Kuo, Roger Keith Hiep <i>Greenkorn</i>	Experimental Verification of Nonlocal Dispersion Theory in Aperiodic Heterogeneous Porous Media	MS May 9, 1998

Graduate Student Major Professor	Thesis Title	Degree Date Granted
Manz, Thomas A. <i>Delgass</i>	Selective Hydrogenation of Butyronitrile on Promoted Raney® Nickel Catalysts	MS May 9, 1998
Novenario, Carlos Rull <i>Caruthers & Chao</i>	Phase Equilibria of Polymer Solutions Using the Chain-of-Rotators Equation of State	PhD May 9, 1998
Pirog, Theodore W. <i>Ramkrishna</i>	Dynamics of Destabilization of Food Emulsions. Measurement and Simulation of Gravity Driven Particle Velocities in Polydisperse Dispersions	PhD May 9, 1998
Scott, Robert A. <i>Peppas</i>	Highly Crosslinked Ionizable Acrylates: Polymerization Kinetics and Network Structure	PhD May 9, 1998
Srinivasan, Rajagopalan <i>Venkatasubramanain</i>	PHAzer: An Intelligent Multiple Models Based Process Hazards Analyzer	PhD May 9, 1998
Walters, William E. <i>Delgass</i>	The Effects of Cesium and Support on the Epoxidation of Ethylene	MS May 9, 1998
Xie, Yi <i>Wang</i>	Separation of Two Amino Acids Using SMB Chromatography	MS May 9, 1998

Course Offerings and Seminars 1997-1998
