

CURRICULUM VITAE
Neville G. Pinto

ADMINISTRATIVE AND ACADEMIC APPOINTMENTS

- 2015 – Present Interim Executive Vice President & Provost
University of Louisville
- 2011- 2015 Dean, J.B. Speed School of Engineering
Professor of Chemical Engineering
University of Louisville
- 2006- 2011 Vice Provost & Dean of the Graduate School
University of Cincinnati
- 2002-2006 Assistant Dean for Graduate Studies, College of Engineering
University of Cincinnati
- 1993-1997 Department Head, Chemical Engineering
University of Cincinnati
- 1985-2011 Professor of Chemical Engineering, University of Cincinnati
(Assistant Professor, 1985-91; Associate Professor 1991-97)
- 1996-2001 Adjunct Professor of Chemistry
Kent State University, Kent, Ohio

EDUCATION

- 1985 Ph.D. Chemical Engineering, The Pennsylvania State University
Dissertation: Development of a Model for Prediction of Diffusion Coefficients in Electrolyte Solutions and Ion Exchangers. Adviser - E. Earl Graham
- 1982 M.S. Chemical Engineering, The Pennsylvania State University
Thesis: High Temperature Vapor Phase Deposition Studies for Organic Liquid Lubricants.
Adviser – E. Erwin Klaus
- 1980 B.Tech. Chemical Engineering, Indian Institute of Technology, New Delhi, India
Graduated with Highest Distinction. *The Indian Institute of Technology is the most selective university in India, with less than 2% of national applicants admitted.*

ADMINISTRATIVE EXPERIENCE

University of Louisville

Interim Executive Vice President and University Provost (May 2015 – Present)

Chief academic officer for the University of Louisville. The university is a national, metropolitan, research university with an enrollment of over 23,000 students and a Carnegie Very High Research designation. The deans of eleven academic colleges, the University Library, and the School of Interdisciplinary and Graduate Studies report to the provost. Additionally, Student Affairs, Strategic Enrollment Management, Institutional Research, Diversity and International Affairs are in the Office of the Provost.

Dean, J.B. School of Engineering (2011 – 2015)

Academic leader and administrative head of the School of Engineering. The School has an enrollment of 1900 undergraduates and 675 graduate students supported by 105 faculty. Major responsibilities include: administering the School's bachelor's, master's and doctoral programs and its research portfolio; providing financial oversight for an annual budget of approximately \$60M and an endowment of \$85M; leadership in strategic planning and implementation; faculty and staff development; fundraising; alumni development and outreach; advocacy at regional, state and federal levels.

University of Cincinnati

Vice Provost & Dean of the Graduate School (2006 - 2011)

Overall leadership for graduate education at the University of Cincinnati, managing an enrollment of over 9000 students in over 170 master's and doctoral programs. Also a member of the University Provost's executive team with responsibility for academic planning, budgeting, enrollment and retention management, promotion and tenure review, program assessment, fundraising and diversity. Member of university task forces on Tuition and Pricing, Performance Based Budgeting, Enrollment Planning, Competitive Graduate Funding, and Graduate and Married Housing. Served on the University's Diversity Council, and chair the University Graduate Council. University liaison for graduate education to the Ohio Board of Regents.

Assistant Dean for Graduate Studies College of Engineering (2002-06)

Established new Graduate Studies Office in the College of Engineering. Consolidated six department-level administrative offices into a single college-level office, to improve services and reduce costs. Administrative responsibilities included advocacy for graduate engineering education, the management of admissions (approximately 1500 applicants per year), co-ordination of recruitment efforts, administration of graduate programs (total enrollment of approximately 1100 students in MS and PhD programs), conversion of records management and admissions to electronic format, liaison to University's upper administration for all college graduate affairs, and budgetary responsibility for graduate fellowships, scholarships and assistantships.

Department Head of Chemical Engineering (1993-97)

Responsibilities included providing leadership for Department's academic programs, budget management, recruitment of graduate and undergraduate students, faculty and staff development, advocacy of programs within and outside the University, strengthening student, alumni and industrial relations, hiring new faculty and staff, and fundraising. The department consisted of over 400 students (\approx 330 undergraduate and 70 graduate), 13 faculty, and 5 staff, and a budget of over \$3 million.

TEACHING EXPERIENCE

A. COURSES TAUGHT

Core and elective courses in the undergraduate Chemical Engineering program, and graduate courses in Bioseparations, Adsorption Processes, Propagation Phenomena, Advanced Thermodynamics, Electrolyte Solutions, and Teaching Methodology.

B. SHORT COURSES TAUGHT

US EPA Environmental Training Institute
Principles of Adsorption (1992-99)

C. AWARDS AND RECOGNITION

Greater Louisville Inc. (Chamber of Commerce, Louisville, KY)
Silver Fleur-de-Lis Award, 2015

Recognizes outstanding achievement in leadership and action to make the Louisville region a better place. Awarded for establishment of FirstBuild within the Institute for Product Realization.

Elected Fellow of the Graduate School University of Cincinnati

Lifetime appointment by Board of Trustees based on outstanding scholarly attainment

Elected to National Academy of Inventors, 2010

In recognition of US patents awarded

BP Outstanding Teaching Award, 2004

Selected by graduating seniors of the chemical engineering program.

Engineering Tribunal Professor of the Year Award, 1994

This is the premiere student-selected award in the College of Engineering

Neal Wandmacher Teaching Award 1992

This is the premiere faculty-selected teaching award in the College of Engineering

ABET Service Recognition Award, 1992-93

For outstanding service for ABET accreditation visit.

Outstanding Chemical Engineering Professor, 1991-92

For outstanding contributions to teaching, research and service

Engineering Tribunal Teaching Certificates of Merit, 1989, 1990, 1995, 1999, 2000

Tau Beta Pi Spotlight Professor, 1990

D. MASTER'S STUDENTS ADVISED

- 1) **Carol Bailey**, "Modeling of Multicomponent Fixed-Bed-Ion-Exchange Systems," M.S., 1988.
- 2) **Ten-Wen Chen**, "Flue Gas Desulfurization by Adsorption on Macroreticular Ion-Exchange Resins," M.S., 1990.
- 3) **Jaydeep Mody**, "Ionic Diffusion in Concentrated Electrolyte Solutions," M.S. (non-thesis), 1990.
- 4) **Jy-Kung King**, "Development and Characterization of a Novel Fiber Support for Large-Scale Chromatography of Biomolecules," M.S., 1991.
- 5) **Robyn Kornhauser**, "Determination of Multicomponent Langmuir Parameters for Displacement Chromatography: Development and Application of a New Method," M.S., 1991.
- 6) **Suresh Subramanian**, "A Non-Langmuirian Adsorption Model for Preparative Chromatography of Biomolecules," M.S., 1991.
- 7) **Anirudh Singh**, "Development and Characterization of a Novel Polymer-Based Fiber Support for Large-Scale Chromatography of Biomolecules," M.S., 1992.
- 8) **Jeff Cook**, "The Development of a Liquid Chromatograph Micromachined on a Silicon Wafer," M.S., 1996.
- 9) **Guihua Liu**, "Molecular Thermodynamic Model for Protein Chromatography," M.S., 1997.
- 10) **Poonam Raje**, "Effect of Heat of Adsorption on Modeling Preparative Protein Chromatography," M.S., 1997.
- 11) **Aditi Chandavarkar**, "A Study of the Heat of Ion Exchange of Proteins and Its Effect on Overloaded Chromatography," M.S., 1998.
- 12) **Qinghua King**, "A Miniaturized Ion-Exchange Liquid Chromatograph on a Silicon Wafer," M.S., 1998.
- 13) **Maria King**, "An Investigation of Hydrophobic Interaction Chromatography of Proteins Using Flow Microcalorimetry," M.S., 1999.

- 14) **Jessica Phillips**, “Heat Effects Accompanying the Adsorption of Oligonucleotides on Hydrophobic Interaction Supports,” M.S., 2003.
- 15) **Yachiyo Nakashimada**, “Conducting Polymers for Electrochemically Modulated Liquid Chromatography of Proteins in a μ -OPPS,” M.S., 2005.
- 16) **Poornima Rao**, “Advanced Adsorbents for Hot Gas Removal of Mercury in Coal Gasification,” M.S. 2010, (co-adviser).

E. DOCTORAL STUDENTS ADVISED

- 1) **S.C. David Jen**, “Ion-Exchange Displacement Chromatography for the Preparative Purification of Pharmaceutical Proteins,” Ph.D., 1991. *Currently: Director Process Formulation & Development, Alexion Pharmaceuticals, Philadelphia, PA.*
- 2) **Chi-Cheng Leng**, “Mechanisms of Adsorption and Desorption of Oxygen and Nitrogen Containing Aromatics on Activated Carbon,” Ph.D., 1996. *Employment upon graduation: MicroLithography, San Jose, CA.*
- 3) **Xueqing Liu**, “Modeling Equilibrium Adsorption of Aromatics on Activated Carbon,” Ph.D., 1996. *Employment upon graduation: Parsons ES, Atlanta, GA.*
- 4) **Yong-Long Li**, “A Study of Non-Ideal Effects in Overloaded Ion-Exchange Chromatography of Proteins,” Ph.D., 1997. *Employment upon graduation: Supelco, Belfonte, PA.*
- 5) **Hassan Arafat**, “Effect of Chemical Surface Heterogeneity on the Adsorption Mechanism of Dissolved Aromatics on Activated Carbon with Applications in Solidification/Stabilization Processes for Hazardous Waste Treatment,” Ph.D., 2000. *Currently: Associate Professor of Environmental Engineering, MASDAR Institute of Science & Technology, Abu Dhabi, UAE.*
- 6) **Marvin Thrash**, “Non-Electrostatic Effects Associated with Protein Adsorption on an Anion Exchange Adsorbent,” Ph.D. 2003. *Currently: Instructor, Environmental Engineering, Central State University, Wilberforce, Ohio.*
- 7) **Blanca Lapizco-Encinas**, “Micro Open Parallel Plate Separator: Performance and Applications,” Ph.D., 2003. *Currently: Associate Professor of Chemical Engineering and Biomedical Engineering, Rochester Institute of Technology, Rochester, NY.*
- 8) **Malyuba Abu Daabes**, “Development of Chelating Sorbents for Adsorption of Vapor-Phase Mercury,” Ph.D., 2004. *Currently: Dean of School of Applied Medical Sciences, Jordanian-German University, Aman, Jordan.*

- 9) **Ana Cristina Cabral**, (co-advised with Prof. Joao Queiroz) “Adsorption of Enzymes on Hydrophobic Interaction Supports,” Ph.D., 2004. *Currently: Assistant Professor of Chemistry, Universidade da Beira Interior, Covilha, Portugal.*
- 10) **Amit Katiyar**, “Molecular Sieve Adsorbents for Selective Biochemical Reactions and Separations,” Ph.D., 2008. *Currently: Section Leader – Late Stage Analytical Biologics, Merck Pharmaceuticals, New Jersey.*
- 11) **Lei Ji**, “Advanced Chelating Adsorbents for the Capture of Elemental and Oxidized Mercury from Flue Gases,” Ph.D., 2008. *Currently: Separations Engineer, Chevron Phillips Chemical Co., Houston, Texas.*
- 12) **Santosh Yadav**, “Water Adsorption in Stratum Corneum: A Calorimetric Study,” Ph.D., 2010. *Currently: Associate Principal Scientist, Merck Pharmaceuticals, New Jersey.*
- 13) **JeungSeung Kim**, “Biomimetic Catalytic Nano-Reactors,” Ph.D. 2011 (co-adviser). *Currently: Postdoctoral Fellow: Energy and Transportation Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.*
- 14) **Kun Liu**, “Slipstream Testing of Novel Nanostructured Chelating Metal Vapor Adsorbents,” Ph.D. 2012 (co-adviser). *Currently: Postdoctoral Fellow, Center for Applied Energy Research, University of Kentucky, Lexington, Kentucky.*
- 15) **Juan He**, “Advanced Chelating Adsorbents for the Direct Capture of Mercury from Combustion Flue Gases,” Ph.D. 2013 (co-adviser). *Currently: Postdoctoral Fellow, Conn Center for Renewable Energy, University of Louisville, Louisville, Kentucky.*
- 16) **Rebecca Desch**, “Thermodynamics and Mass Transport of Biomolecule Adsorption on Chromatographic Media,” Ph.D. 2013 (co-adviser).

F. OTHER GRADUATE STUDENTS ADVISED

- 1) **Daniel S. Janke**, “Design of a Continuous Radon Adsorption Column,” M.S., 1994, University of Washington, Seattle.
- 2) **Marcus Franz**, “On the Influence of Surface Oxygen and Electrolyte Concentration On Adsorption Behavior of Aromatics on Activated Carbon,” M.S. (equivalent), 1998, Technische Universität Bergakademie Freiberg, Freiberg, Germany.
- 3) **Falk Ahnert**, “Surface Effects in the Adsorption of Liquid Aromatics on Activated Carbon,” M.S. (equivalent), 1999, Technische Universität Bergakademie Freiberg, Freiberg, Germany.
- 4) **Christian Kunze**, “An Investigation of the Potential of Functionalized SBA-15 for Recovery and Immobilization of Xylanase from *Thermomyces Lanuginosus*,” M.S. (equivalent) 2005, Technische Universität Bergakademie Freiberg, Freiberg, Germany.

RESEARCH EXPERIENCE

A. REFEREED PAPERS (Published)

1. de Gouvea-Pinto, N. J.L. Duda, E.E. Graham and E.E. Klaus, **In situ Formation of Solid Lubricating Films from Conventional Mineral Oil and Ester Base Lubricants**, ASLE, SP-14, 98-104 (1984).
2. de G. Pinto, N. and E.E. Graham, **Evaluation of Diffusivities in Electrolyte Solutions Using Stefan-Maxwell Equations**, AIChE J., 32, 291-296 (1986). DOI: 10.1002/aic.690320216
3. Pinto, N.G. and E.E. Graham, **Application of the Shrinking Core Model for Predicting Protein Adsorption**, Reactive Polymers, 5, 49-53 (1987). DOI: 10.1016/0167-6989(87)90164-4
4. Pinto, N.G. and E.E. Graham, **Multicomponent Diffusion in Concentrated Electrolyte Solutions: Effect of Solvation**, AIChE J., 33, 436-443 (1987). DOI: 10.1002/aic.690330309
5. Graham, E.E., N.G. Pinto and A. Pucciani, **A Comparative Study of Models to Predict Protein Adsorption**, Biotech. Prog., 3, 141-145 (1987). DOI: 10.1002/btpr.5420030305
6. Pinto, N.G. and E.E. Graham, **Characterization of Ionic Diffusivities in Ion-Exchange Resins**, I. & E.C. Res., 26, 2331-36 (1987). DOI: 10.1021/ie00071a026
7. Bailey, C.B. and N.G. Pinto, **Multicomponent Fixed-Bed Ion Exchange: Verification of Equilibrium Theory of Coherence**, Sep. Sci. & Tech., 23, 1853-73 (1988). DOI: 10.1080/01496398808075668
8. Chen, T.W., N.G. Pinto and L. Van Brocklin, **Rapid Method for Determining Multicomponent Langmuir Parameters for Displacement Chromatography**, J. Chrom., 484, 167-185 (1989). DOI: 10.1016/S0021-9673(01)88967-6
9. Chen, T.W. and N.G. Pinto, **Stability and Equilibrium Properties of Macroreticular Resins for Flue Gas Desulfurization**, I. & E. C. Res., 3, 440-446 (1990). DOI: 10.1021/ie00099a021
10. Pinto, N.G., **Partially Oriented Short-Fiber Beds for Downstream Processing of Biomolecules**, Reactive Polymers, 12, 2, 201-205 (1990). DOI: 10.1016/0923-1137(90)90123-L
11. Jen, S.C.D. and N.G. Pinto, **Use of Sodium Salt of Poly(vinylsulfonic acid) as a Low Molecular Weight Displacer for Protein Separations by Ion-Exchange Displacement Chromatography**, J. Chrom., 519, 87-98 (1990). DOI: 10.1016/0021-9673(90)85137-K
12. Chen, T.W. and N.G. Pinto, **Fixed-Bed Adsorption of Acid Gases on a Macroreticular Ion-Exchange Resin**, Reactive Polymers, 14, 151-168 (1991). DOI: 10.1016/0923-1137(91)90273-Q
13. Jen, S.C.D. and N.G. Pinto, **Dextran Sulfate as a Displacer for Displacement Chromatography of Pharmaceutical Proteins**, J. Chrom. Sci., 29, 478-484 (1991).
14. Jen, S.C.D. and N.G. Pinto, **Theory of Optimization of Ideal Displacement Chromatography of Binary Mixtures**, J. Chrom., 590, 3-15 (1992). DOI: 10.1016/0021-9673(92)87002-P
15. King, J.K. and N.G. Pinto, **Short Fibrous Supports for Preparative Chromatographic Separations of Biomolecules**, J. Chrom., 609, 61-68 (1992) DOI: 10.1016/0021-9673(92)80149-O.
16. Jen, S.C.D. and N.G. Pinto, **Influence of Displacer Properties on the Displacement Chromatography of Proteins: A Theoretical Study**, Reactive Polymers, 19, 145-161 (1993).

17. Jen, S.C.D. and N.G. Pinto, **A Modification of the H-Root Method for the Determination of Langmuir Coefficients**, *J. Chrom.*, 662, 396-400 (1994). DOI: 10.1016/0021-9673(94)80527-X
18. Li, Y.L. and N.G. Pinto, **Influence of Lateral Interactions on Preparative Protein Chromatography: Part I. Isotherm Behavior**, *J. Chrom.*, 658, 445-457 (1994). DOI: 10.1016/0021-9673(94)80035-9
19. Fotou, G.P., S.E. Pratsinis and N.G. Pinto, **Surface Enhancement of Silica Fibers by Sol-Gel Processes**, *J. Non Crystalline Solids*, 183, 135-143 (1995). DOI: 10.1016/0022-3093(94)00557-5
20. Farschman, C., J.B. Manos and N.G. Pinto, **Short-Fiber Chromatography Columns: Potential for Process-Scale Bioseparations**, *Sep. Sci. & Tech.*, 30, 1325-1350 (1995). DOI: 10.1080/01496399508010349
21. Singh, A. and N.G. Pinto, **Polymeric Short-Fiber Chromatographic Supports for Downstream Processing of Biomolecules**, *Reactive Polymers*, 4, 229-242 (1995). DOI: 10.1016/0923-1137(94)00088-M
22. Li, Y.L. and N.G. Pinto, **Model for Ion-Exchange Equilibria of Macromolecules in Preparative Chromatography**, *J. Chrom.*, 702, 113-123 (1995). DOI: 10.1016/0021-9673(94)01281-I
23. Li, Y.L., N.G. Pinto, H.T. Henderson, S.T. Hwang and P. Nguyen, **Permeabilities of Gases in Thermally-Grown Silicon Dioxide**, *Matl. Sci. & Eng.*, B32, 63-68 (1995). DOI: 10.1016/0921-5107(94)01175-3
24. Jen, S.C.D. and N.G. Pinto, **Non-Linear Chromatography of β -Lactoglobulins A and B: Non-Langmuirian Behavior**, *I. & E. C. Res.*, 34, 2685-91 (1995). DOI: 10.1021/ie00047a018
25. Leng, C.C. and N.G. Pinto, **An Investigation of the Mechanisms of Chemical Regeneration of Activated Carbon**, *I. & E. C. Res.*, 35, 2024-2031 (1996). DOI: 10.1021/ie950576a
26. Liu, X. and N.G. Pinto, **Frequency Domain π -phase Shift Reflectometry for Soil Moisture Measurement: I Theory**, *Sensors & Actuators A*, 55, 127-132 (1996).
27. Liu, X. and N.G. Pinto, **Ideal Adsorbed Phase Model for Adsorption of Phenolic Compounds on Activated Carbon**, *Carbon*, 35, 1387-97 (1997). DOI: 10.1016/S0008-6223(97)00092-4
28. Leng, C.C. and N.G. Pinto, **Effects of Surface Properties of Activated Carbons on Adsorption Behavior of Selected Aromatics**, *Carbon*, 35, 1375-85 (1997). DOI: 10.1016/S0008-6223(97)00091-2
29. Raje, P. and N.G. Pinto, **A Combination of the SMA and NISS Models for Overload Protein Ion-Exchange Chromatography**, *J. Chrom.*, 760, 89-103 (1997). DOI: 10.1016/S0021-9673(96)00812-6
30. Raje, P. and N.G. Pinto, **Importance of Heat of Adsorption in Modeling Protein Equilibria for Overloaded Chromatography**, *J. Chrom.*, 796, 141-156 (1998). DOI: 10.1016/S0021-9673(97)01071-6
31. Chandavarkar, A. and N.G. Pinto, **Modeling the Adsorption of Proteins in Overloaded Ion-Exchange Chromatography**, *Fund. of Adsorption*, 6, 413-418, (1998).
32. Arafat, H.A., M. Franz and N.G. Pinto, **Effect of Salt on the Mechanism of Adsorption of Aromatics on Activated Carbon**, *Langmuir*, 15, 5997-6003 (1999). DOI: 10.1021/la9813331
33. Hebatpuria, V.M., H.A. Arafat, P.L. Bishop and N.G. Pinto, **Leaching Behavior of Selected Aromatics in Cement-Based Solidification/Stabilization under Different Leaching Tests**, *Env. Eng. Sci.*, 16(6), 451-463 (1999). DOI: 10.1089/ees.1999.16.451
34. Esquibel-King, M.A., A.C. Dias-Cabral, J.A. Queiroz, and N.G. Pinto, **A Study of Hydrophobic Interaction Adsorption of Bovine Serum Albumin Under Overloaded Conditions Using Flow Microcalorimetry**, *J. Chrom.* 865, 111-122 (1999). DOI: 10.1016/S0021-9673(99)01118-8.

35. Hebatpuria, V. M., H.A. Arafat, H.S. Rho, N.G. Pinto, P.L. Bishop and R.V. Buchanan, **Immobilization of Phenol in Cement-Based Solidified/Stabilized Hazardous Wastes Using Regenerated Activated Carbon: Leaching Studies**, *J. Hazardous Materials*, 70, 3, 117-138 (1999). DOI: 10.1016/S0304-3894(99)00128-4
36. Arafat, H.A., V.M. Hebatpuria, H.S. Rho, N.G. Pinto, P.L. Bishop and R.V. Buchanan, **Immobilization of Phenol in Cement-Based Solidified/Stabilized Hazardous Wastes Using Regenerated Activated Carbon: Role of Carbon**, *J. Hazardous Materials*, 70, 3, 177-138 (1999) DOI: 10.1016/S0304-3894(99)00127-2.
37. Franz, M., H.A. Arafat and N.G. Pinto, **Effects of Surface Heterogeneity on the Adsorption Mechanism of Aromatics on Carbon**, *Carbon*, 38, 1807-1819 (2000). DOI: 10.1016/S0008-6223(00)00012-9
38. Rho, H., H.A. Arafat, B. Kountz, R.C. Buchanan, N.G. Pinto and P.L. Bishop, **Decomposition of Hazardous Organic Materials in the Solidification/Stabilization Process Using Catalytic Activated Carbon**, *J. Waste. Manag.*, 21, 4, 343-356 (2001). DOI: 10.1016/S0956-053X(00)00080-5
39. Kang, Q., N. Golubovic, N.G. Pinto and H. Henderson, **An Integrated Micro Separator and Detector on a Silicon Wafer**, *Chem. Eng. Sci.*, 56, 3409-20 (2001). DOI: 10.1016/S0009-2509(01)00035-5
40. Thrash, M. and N.G. Pinto, **Flow Microcalorimetric Measurements for Bovine Serum Albumin on Reversed-Phase and Anion-Exchange Supports Under Overloaded Conditions**, *J. Chrom.* 908, 293-299 (2001). DOI: 10.1016/S0021-9673(00)01034-7
41. Thrash, M. and N.G. Pinto, **Characterization of Enthalpic Events in Overloaded Ion-Exchange Chromatography**, *J. Chrom.*, 944, 61-68 (2002). DOI: 10.1016/S0021-9673(02)00056-0
42. Uribe, A., P.L. Bishop and N.G. Pinto, **The Influence of pH and Temperature Changes on the Adsorption Behavior of Organophilic Clays Used in the Stabilization/Solidification of Hazardous Wastes**, *Env. Eng. Sci.*, 1, 123-133 (2002).
43. Dias A.C., N.G. Pinto, and J. Queiroz, **Studies on Hydrophobic Interaction Adsorption of Bovine Serum Albumin on Polypropylene Glycol-Sepharose Under Overloaded Conditions**, *Sep. Sci. & Tech.*, 37, 1505-1520 (2002). DOI: 10.1081/SS-120002734
44. Lapizco-Encinas, B.H. and N.G. Pinto, **Performance Characteristics of Novel Open Parallel Plate Separator**, *Sep. Sci. & Tech*, 37, 2745-2762 (2002). DOI: 10.1081/SS-120005464
45. Ahnert, F., H.A. Arafat and N.G. Pinto, **A Study of the Influence of Hydrophobicity of Activated Carbon on the Adsorption Equilibrium of Aromatics in Non-Aqueous Media**, *Adsorption*, 9, 311-319 (2003). DOI: 10.1023/A:1026271830072
46. Lapizco-Encinas, B. and N.G. Pinto, **A Comparison of Preparative Characteristics of μ OPPS and Microbore Columns for Concentration of Trace Species by Displacement Chromatography**, *J. Chrom.*, 989, 3-17 (2003). DOI: 10.1016/S0021-9673(02)01609-6
47. Dial-Cabral, A.C., J.A. Queiroz and N.G. Pinto, **Effect of Salts and Temperature on the Adsorption of BSA on Polypropylene Glycol-Sepharose Under Linear and Overloaded Chromatographic Conditions**, *J. Chrom.*, 1018, 137-153 (2003). DOI: 10.1016/j.chroma.2003.07.010
48. Diogo, M.M., D.M.F. Prazeres, N.G. Pinto and J.A. Queiroz, **Hydrophobic Interaction Chromatography of Homo-oligonucleotides on Derivatized Sepharose CL-6B. Using and Relating Two Models for Describing the Effect of Salt and Temperature on Retention**, *J. Chrom.*, 1006, 137-148 (2003). DOI: 10.1016/S0021-9673(03)00918-X

49. Arafat, H.A., F. Ahnert and N.G. Pinto, **On the Adsorption of Aromatics on Oxygenated Activated Carbon in Non-Aqueous Adsorption Media**, Sep. Sci. & Tech., 39, 1, 43-62 (2004). DOI: 10.1081/SS-120027400
50. Phillips, J.M. and N.G. Pinto, **A Calorimetric Investigation of the Adsorption of Nitrogen Bases and Nucleosides on a Hydrophobic Interaction Support**, J. Chrom., 1036 (1), 79-86 (2004). DOI: 10.1016/j.chroma.2003.10.129
51. Lapizco Encinas, B. and N.G. Pinto, **Effectiveness of H-Root Method for Determining the Adsorption Isotherms of Protein-Salt Systems in Open Micro-Channels**, J. Chrom., 1036 (1), 61-72 (2004). DOI: 10.1016/j.chroma.2003.10.120
52. Lapizco-Encinas, B. and N.G. Pinto, **On the Potential of Electrochemically Modulated Liquid Chromatography of Proteins in a μ -OPPS Separator**, J. Sep. Sci., 27 (9), 667-674 (2004). DOI: 10.1002/jssc.20401771
53. Abu Daabes, M. and N.G. Pinto, **Effect of Surface Oxygen Complexes of Activated Carbon On Phenol Adsorption from Single and Mixed Non-Aqueous Solvents**, Sep. Sci. & Tech, 39 (13), 2997-3009 (2004). DOI: 10.1081/SS-200033724
54. Ji, L., A. Katiyar, N.G. Pinto, M. Jaroniec and P.G. Smirniotis, **Al-MCM-41 Sorbents for Bovine Serum Albumin: Relation between Al Content and Performance** Microporous & Mesoporous Matls., 75 (3), 221-229 (2004). DOI: 10.1016/j.micromeso.2004.07.012
55. Thrash, Jr., M.E., J.M. Phillips and N.G. Pinto, **An Analysis of the Interactions of BSA with an Anion Exchange Surface under Non-Linear Conditions**, Adsorption, 10, 299-307 (2005).
56. Abu Daabes, M. and N.G. Pinto, **Synthesis and Characterization of a Nano-structured Sorbent for the Direct Removal of Mercury from Flue Gases by Chelation**, Chem. Eng. Sci., 60(7), 1901-1910 (2005). DOI: 10.1016/j.ces.2004.11.028
57. Katiyar, A. L. Ji, P. G. Smirniotis and N. G. Pinto, **Protein adsorption on the Mesoporous Molecular Sieve Silicate SBA-15: Effects of pH and Pore Size**, J. Chrom., 1069(1), 119-126 (2005). DOI: 10.1016/j.chroma.2004.10.077
58. Lapizco-Encinas, B. and N.G. Pinto, **Determination of Adsorption Isotherms of Proteins by H-Root-Method: Comparison between Open Micro-Channels and Conventional Packed Columns**, J. Chrom. 1070 (1-2), 201-205 (2005). DOI: 10.1016/j.chroma.2005.02.032
59. Katiyar, A. L. Ji, P. G. Smirniotis and N. G. Pinto, **Adsorption of Bovine Serum Albumin on Siliceous MCM-41**, Microporous & Mesoporous Matls., 80(1-3), 311-320 (2005). DOI: 10.1016/j.micromeso.2004.11.026
60. Dias-Cabral, A.C., A. S. Ferreira, J. Phillips, J. A. Queiroz and N. G. Pinto, **The Effects of Ligand Chain Length, Salt Concentration and Temperature on the Adsorption of Bovine Serum Albumin onto Polypropyleneglycol-Sepharose**, Biomedical Chromatogr., 19, 606-616 (2005). DOI: 10.1002/bmc.487
61. Katiyar, A., S. Yadav, P. G. Smirniotis and N.G. Pinto, **Synthesis of Ordered Large Pore SBA-15 Spherical Particles for Chromatographic Separations of Biomolecules**, J. Chrom., 1122 (1-2), 13-20 (2006). DOI: 10.1016/j.chroma.2006.04.055
62. Katiyar, A. and N.G. Pinto, **Visualization of Size-Selective Protein Separations on Spherical Mesoporous Silicates**, Small, 2, 5, 644-648 (2006). DOI: 10.1002/smll.200500473
63. Thrash, M.A. and N.G. Pinto, **Incorporating Water Release and Lateral Protein Interactions in Modeling Equilibrium Adsorption for Ion-Exchange Chromatography**, J. Chrom., 1126, 304-310

(2006). DOI: 10.1016/j.chroma.2006.06.058

64. Yadav, S., N.G. Pinto and G.B. Kasting, **Thermodynamics of Water Interactions with Human Stratum Corneum from, I. Measurement by Isothermal Flow Calorimetry**, *J. Pharma. Sci.*, 96, 1585-1597 (2007). DOI: 10.1002/jps.20781
65. Ji, L., S.W. Thiel and N.G. Pinto, **Pyrrolidinium Imides: Promising Ionic Liquids for Direct Capture of Elemental Mercury from Flue Gas**, *Water, Air and Soil Pollution: Focus*, 8, 349-358 (2008).
66. Ji, L., P.M. Sreekanth, P.G. Smirniotis, S.W. Thiel and N.G. Pinto, **Manganese Oxide/Titania Materials for Removal of NO_x and Elemental Mercury from Flue Gas**, *Energy & Fuels*, 22, 2299-2306 (2008). DOI: 10.1021/ef700533q
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68. Peise, O., L. Ji, S.W. Thiel and N.G. Pinto, **New Adsorbents for Direct Warm-Gas Capture of Mercury**, *J. of Main Group Chem.*, 7, 181-189 (2008). DOI: 10.1080/10241220802376501
69. Ji, L., M. Abu-Daibes and N.G. Pinto, **Thermally Robust Chelating Adsorbents for the Capture of Gaseous Mercury: Fixed-Bed Behavior**, *Chem. Engr. Sci.* 64, 486-491(2009). DOI: 10.1016/j.ces.2008.09.012
70. Yadav, S., Wickett, R.R. N.G. Pinto, G.B. Kasting and S.W. Thiel, **Comparative Thermodynamic and Spectroscopic Properties of Water Interaction with Human Stratum Corneum**, *Skin Research & Technology*, 15, 172-179 (2009). DOI: 10.1111/j.1600-0846.2008.00344.x
71. Jaladi, H., A. Katiyar, S.W. Thiel, V.V. Gulians and N.G. Pinto, **Effect of Pore Diffusional Resistance on Biocatalytic Activity of *Burkholderia Cepacia* Lipase Immobilized on SBA-15 Hosts**, *Chem. Eng. Sci.*, 64, 1474-1479 (2009). DOI: 10.1016/j.ces.2008.10.042
72. Yadav, S., S.W. Thiel, G.B. Kasting, and N.G. Pinto, **Thermodynamics of Water Interactions with Human Stratum Corneum. II. Interpretation Via the Guggenheim-Anderson-deBoer Isotherm**, *Chem. Eng. Sci.*, 64, 1480-1487 (2009). DOI: 10.1016/j.ces.2008.11.015
73. Katiyar, A., S.W. Thiel, V.V. Gulians and N.G. Pinto, **Investigation of the Mechanism of Protein Adsorption on Ordered Mesoporous Silica using Flow Microcalorimetry**, *J. Chrom.*, 1217, 1583-1588 (2010). DOI: 10.1016/j.chroma.2009.12.058
74. Kim, J., R.J. Desch, S.W. Thiel, V.V. Gulians and N.G. Pinto, **Energetics of Lysozyme Adsorption on Mesostructured Cellular Foam Silica: Effect of Salt Concentration**, *J. Chrom. A*. 1218, 38, 6697-6704 (2011). DOI: 10.1016/j.chroma.2011.07.065
75. Kim, J., R.J. Desch, S.W. Thiel, V.V. Gulians and N.G. Pinto, **Energetics of Protein Adsorption on Amine-Functionalized Mesostructured Cellular Foam Silica**, *J. Chrom. A*. 1218, 43, 7796-7803 (2011). DOI: 10.1016/j.chroma.2011.08.083
76. He, J., G.K. Reddy, S.W. Thiel, P.G. Smirniotis and N.G. Pinto, **Ceria-Modified Manganese/Titania Materials for Removal of Elemental and Oxidized Mercury from Flue Gas**, *J. Phys. Chem. C*, 115, 49, 24300-24309 (2011). DOI: 10.1021/jp208768p
77. Kim, J., R.J. Desch, S.W. Thiel, V.V. Gulians and N.G. Pinto, **Adsorption of Biomolecules on Mesostructured Cellular Foam Silica: Effect of Acid Concentration and Aging Time in Synthesis**, *Microporous & Mesoporous Matls.* 149, 1, 60-68 (2012). DOI: 10.1016/j.micromeso.2011.08.031

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79. He, J., G.K. Reddy, S.W. Thiel, P.G. Smirniotis and N.G. Pinto, **Simultaneous Removal of Elemental Mercury and NO from Flue Gas using CeO₂ Modified MnO_x/TiO₂ Materials**, *Energy and Fuels*, 27(8), 4832-4839, (2013). DOI: 10.1021/ef400718n
80. Desch, R.J., B. Daniel, A. Frierson, L. Miyahara, B.T. Turner, J. Kim, J. L. Fantini, V.V. Guliants, S. W. Thiel, and N. G. Pinto, **Physisorption of Three Calix[4]arenes on Alkyl-Functionalized Mesoporous Silica for Biomimetic Ligand Development**, *Ind. Eng. Chem. Res.*, 52 (47), 16755–16765 (2013). DOI: 10.1021/ie401970z

B. CONFERENCE PROCEEDINGS (Published)

81. Newman B. and N.G. Pinto, **Estimation of Diffusivities in Concentrated Electrolyte Solutions**, *Electrochem. Soc. Proc. Ser.*, 88-18, 57 (1988).
82. Golubovic, N.C., Q. Kang, H.T. Henderson and N.G. Pinto, **MEMS Based Micro Fluidic System for Chromatographic Analysis of Liquid Samples**, *Proceedings of SPIE* 98, 3515 (1998).
83. Abu Daabes, M. and N.G. Pinto, **Preliminary Results of an Investigation on The Feasibility of a Novel Chelating Adsorbent for the Control of Gaseous Mercury Emissions**, *Proceedings of the 19th Annual International Pittsburgh Coal Conference*, 24-1, Sept. (2002).
84. Dolgoff J., G.G. Lipscomb, K. Pugh, S. Beltyukova and N.G. Pinto, **Experiments in Membrane Separation Processes Delivered Through the Internet**, *Proceedings of the 2003 American Society of Engineering Education Annual Conference*, Session 1526, (2003).
85. Katiyar A., P. G. Smirniotis and N.G. Pinto, **Mesoporous Molecular Sieves for Size Selective Separation of Biomolecules**, *Proceedings of Eighth International Conference on Inorganic Membranes*, July 18-22, Cincinnati, Ohio, (2004).

C. BOOK CHAPTERS (Published)

86. Pinto, N.G., **Removal of Acid Gases from Combustion Flues by Adsorption on Ion Exchangers**, in “Ion Exchange Technology: Recent Advances in Pollution Control,” A.K. Sengupta, Ed., Chapter 9, Technomic Publishing, Lancaster, PA (1995).
87. Thrash M. and N.G. Pinto, **Protein and Peptides Purification in Pharmaceutical Analysis**, in *Encyclopedia of Analytical Chemistry*, A. Holyoak, Ed., 7259-7288, John Wiley & Sons Ltd., Chichester, UK (2000).

D. PATENTS

88. Henderson, H.T. and N. G. Pinto, **Liquid Chromatograph on a Chip**, U.S. Patent 6,258,263, July 10, 2001.
89. Pinto, N.G and M. Abu Daabes, **High Capacity Materials for Capture of Metal Vapors from Gas Streams**, U.S Patent, 8,118,196, Feb. 21, 2012.

E. AWARDS OF CONTRACTS AND GRANTS

1. A Study of Diffusion in Multicomponent Systems, University Research Council (Internal), 1986-87, \$3,750, (PI).
2. Modeling Fixed-Bed Adsorption for Coal-Gas Cleanup, University Research Council (Internal), 1987-88, \$3,500, (PI).
3. Control of Local Equivalence Ratios Using Electric Fields, Herman Schneider Foundation (Internal), 1987-88, \$3,750, (PI).
4. Flue Gas Desulfurization with Ion-Exchange Resins, Ohio Department of Development, 1987-90, \$221,000, (PI).
5. Fuel-Cell Electrolytes: Non-Aqueous -Mixed Solvents, University Research Council (Internal), 1987-88, \$6,400, (PI).
6. Development of a Glucose Microsensor, Amoco Foundation (Internal), 1988-89, \$20,000, (PI).
7. Development of a Chromatographic Microsensor, Ohio Board of Regents, 1988-89, \$115,000, (PI).
8. Development of a Novel Coal Feeder System for Circulating Fluidized Bed Combustors, Ohio Department of Development, 1989-90, \$100,000, (co-PI), share- \$50,000.
9. Development of a Partially Oriented Fiber Bed for Downstream Processing of Biomolecules, National Science Foundation, 1989-91, \$70,000, (PI).
10. Research Experiences for Undergraduate Students, National Science Foundation, 1989-92, \$125,000, (co-PI), share - \$31,250.
11. A Novel Chromatographic System for High Throughput Bioseparations, University Research Council (Internal), 1990-91, \$7,013, (PI).
12. Purification of Monoclonal Antibodies by Ion Exchange, National Science Foundation, 1992-95, \$140,231, (PI).
13. Separation Science Consortium, Ohio Board of Regents, 1993-96, \$1,750,000, (co-PI), share - \$299,000.
14. Supplemental Award, National Science Foundation, 1994-95, \$4,978, (PI).
15. Radium Recovery from Vitrified K-65 Waste, Department of Energy (FERMCO), 1996-97, \$46,800, (PI).
16. Stabilization/Solidification of Organically Contaminated Wastes Using Reactivated Carbon, National Science Foundation, 1996-00, \$670,000, (co-PI), share - \$223,000.
17. An Investigation of a Catalytic Carbon for Removal of Hormonally Active Agents from Drinking Water, University Research Council (Internal), 2001-02, \$5,000, (PI).
18. Gas-Phase Chelating Agents for Removal of Mercury from Flue Gases, Ohio Department of Development, 2001-02, \$111,051, (PI).
19. Gas-Phase Chelating Agents for Removal of Mercury from Flue Gases, Ohio Department of Development, 2002-03, \$110,061, (PI).

20. Internet-based Unit Operations Laboratory, National Science Foundation, 2003-05, \$146,010, (co-PI), share - \$72,784.
21. Exploratory Studies to Evaluate Potential of Novel Nanoporous Media for Highly Selective Separations of Biomolecules, National Science Foundation, 2002-04, \$99,394, (PI), share - \$49,697.
22. Gas-Phase Chelating Agents for Removal of Mercury from Flue Gases, Ohio Department of Development, 2003-04, \$108,184, (PI).
23. NIRT: Biocatalytic Membrane Nanosystems, National Science Foundation, 2004-10, \$1,000,000, (co-PI), share - \$250,000.
24. Gas-Phase Chelating Agents for Removal of Mercury from Flue Gases, Ohio Department of Development, 2004-05, \$110,483, (PI).
25. Simultaneous Removal of NO_x and Mercury in Low Temperature Selective Catalytic and Adsorptive Reactor, Department of Energy, 2004-05, \$58,985, (PI), share - \$29,492.
26. Gas-Phase Chelating Agents for Removal of Mercury from Flue Gases, Ohio Department of Development, 2005-06, \$113,307, (PI).
27. Integrated Removal of NO_x, with Carbon Monoxide as Reductant, and Capture of Mercury in a Low Temperature Selective Catalytic and Adsorptive Reactor, Department of Energy, 2006-10, \$200,000, (PI), share - \$100,000.
28. Improved Process Economics for Novel Nanostructured Chelating Adsorbents for Direct Capture of Mercury from Coal Combustions Flue, Ohio Department of Development, 2006-07, \$115,259, (PI).
29. Advanced Adsorbents for Hot Gas Removal of Mercury in Coal Gasification, Ohio Department of Development, 2006-07, \$115,242, (PI).
30. Water Vapor Sorption Characteristics of Neonatal Skin, Kao Corp. (Japan), 2006-07, \$50,000, (PI), share - \$44,289.
31. Advanced Adsorbents for Direct Capture of Gas-Phase Mercury, Ohio Department of Development, 2007-09, \$210,897, (Co-PI), share - \$105,448
32. Slipstream Testing Of Novel Nanostructured Chelating Metal Vapor Adsorbents For Direct Capture Of Mercury From Coal Combustion Flue Gas, Ohio Department of Development, 2007-10, \$309,225, (PI), share - \$154,612.
33. Advanced Adsorbents for Hot Gas Removal of Mercury in Coal Gasification, Ohio Department of Development, 2007-08, \$103,839, (Co-PI), share - \$51,919.
34. Advanced Adsorbents for Hot Gas Removal of Mercury in Coal Gasification, Ohio Department of Development, 2008-10, \$211,559, (Co-PI), share - \$105,779.
35. Thermodynamic Properties of Solvents for Carbon Dioxide Capture, Babcock & Wilcox Power Generation Group, Baberton, OH, 2010-2011, \$139,082, (Co-PI), share-\$69,041.

F. RESEARCH PRESENTATIONS

1. **Pinto**, N.G. and E.E. Graham, "Diffusion of Electrolytes in Concentrated Solutions," Paper 37e, AIChE Annual Meeting, San Francisco, CA, Nov. (1984).
2. **Pinto**, N.G. and E.E. Graham, "A Predictive Model for Ion Exchange of Proteins," Paper 59e, AIChE Annual Meeting, Chicago, Nov. (1985).
3. Bailey, C.B. and N.G. **Pinto**, "Non-equilibrium Model for Multicomponent Fixed- Bed Ion Exchange," 5th Symposium on Separation Science and Technology for Energy Applications, Knoxville, Oct. (1987).
4. Newman, B. and N.G. **Pinto**, "Estimation of Transport Properties in Concentrated Electrolyte Solutions," Paper 71f, AIChE Annual Meeting, New York, Nov. (1987).
5. Chen, T-W. and N.G. **Pinto**, "Desulfurization of Flue Gases with Macroreticular Ion-Exchange Resins," Paper 65b, AIChE Annual Meeting, Washington, D.C. Nov. (1988).
6. Chen, T-W. and N.G. **Pinto**, "Use of the Coherence Theory to Measure Isotherms For Displacement Chromatography," invited poster presentation, Gordon Research Conference on Reactive Polymers, Ion Exchangers, and Adsorbents, Newport RI, Aug. (1989).
7. Jen, S.C. and N.G. **Pinto**, "Ion Exchange Displacement Chromatography of Proteins," Paper No. 76c, AIChE Annual Meeting, San Francisco, CA, Nov. (1989).
8. **Pinto**, N.G., "Membrane Based Chemical Sensors" Research Seminar, Center for Microsensors and Microstructures, University of Cincinnati, May (1990).
9. **Jen**, S.C. and N.G. **Pinto**, "On the Use of Dextran Sulfates as Displacers for Ion Exchange Displacement Chromatography of Proteins," Paper No. 117, 200th ACS Meeting, Washington, D.C., Aug. (1990).
10. King, J.K. and N.G. **Pinto**, "A New Fiber Support for Ion-Exchange Chromatography of Proteins," Paper No. 241e, AIChE Annual Meeting, Chicago, IL, Nov. (1990).
11. **Pinto**, N.G., "Fabrication of Silicon Dioxide Membranes," Institute of Advanced Manufacturing Science, Cincinnati, OH, April (1990).
12. **Jen**, S.C. and N.G. **Pinto**, "A Theoretical Optimization Method for Ideal Displacement Chromatography of Binary Mixtures," 4th International Symposium on Preparative Chromatography, Arlington, WA, May (1991).
13. **Jen**, S.C. and N.G. **Pinto**, "Displacement Chromatography as a Tool for the Preparative Separation of Biomolecules," Poster Presentation, Ohio Valley Chromatography Symposium, Houston Woods, OH, June (1991).
14. Singh, A., J.K. King and N.G. **Pinto**, "Short-Fiber Supports for High-Flow Ion -Exchange Chromatography," paper presented at ACS Meeting, Atlanta, GA, Aug. (1991).
15. **Jen**, S.C. and N.G. **Pinto**, "Displacer Selection in Displacement Chromatography For the Purification of Proteins," Paper No. 77h, AIChE Annual Meeting, Los Angeles, CA, Nov. (1991).
16. **Yam**, R. and N.G. **Pinto**, "Effects of Non-Langmuirian Adsorption on Overload Chromatography," poster presentation, AIChE Annual Meeting, Los Angeles, CA, Nov. (1991).

17. **Jen**, S.C. and N.G. **Pinto**, "Determination of Multicomponent Equilibrium and Kinetic Parameters for Modeling Overload Liquid Chromatographic Separations of β -Lactoglobulin A and B," Paper No. 275e, AIChE Annual Meeting, Los Angeles, CA, Nov. (1991).
18. **Pinto**, N.G., "Strategies for Preparative Ion-Exchange Chromatography of Proteins," invited seminar, Purdue University, West Lafayette, IN, Oct. (1991).
19. **Jen**, S.C. and N.G. **Pinto**, "Optimization of Displacement Chromatography of Binary Mixture: An Application of the Coherence Theory," Paper No. 89e, invited paper, AIChE Annual Meeting, Miami, FL, Nov. (1992).
20. **Pinto**, N.G., "Fixed-Bed Adsorption with Displacement Development: Opportunities for Use in Environmental Applications," invited seminar, Environmental Protection Agency, Risk Reduction Engineering Laboratory, Cincinnati, OH, Oct. (1992).
21. **Fotou**, G.P., S.E. Pratsinis and N.G. **Pinto**, "Preparation of Submicron Particle-Coated Silica Fibers by Sol-Gel Process: A New Chromatographic Support," Paper No. 192a, AIChE Annual Meeting, Miami, FL, Nov. (1992).
22. **Farschman**, C., J.B. **Manos** and N.G. **Pinto**, "Short Fiber Chromatography," poster presentation, DOE Conference on Separation Science and Technology for Energy Applications, Gatlinburg, TN, Oct. (1993).
23. **Li**, Y.L. and N.G. **Pinto**, "On the Effects of Lateral Interactions on Preparative Protein Chromatography," invited paper, PREP-93, 6th International Symposium on Preparative Chromatography, Arlington, VA, June (1993).
24. **Li**, Y.L. and N.G. **Pinto**, "Ion Exchange Equilibria of Proteins in Preparative Chromatography," Paper No. 146g, AIChE Meeting, San Francisco, CA, Nov. (1994).
25. **Li**, Y.L. and N.G. **Pinto**, "A Model for Ion-Exchange Equilibria of Macromolecules in Preparative Chromatography," invited paper, PREP-94, 7th International Symposium on Preparative Chromatography, Washington, D.C., June (1994).
26. **Pinto**, N.G., "Perspectives on Preparative Ion-Exchange Chromatography for Bioseparations," invited seminar, The Pennsylvania State University, University Park, PA, March (1994).
27. **Pinto**, N.G., "Overload Ion-Exchange Chromatography for Downstream Processing," invited seminar, University of Toledo, Toledo, OH, March (1995).
28. **Pinto**, N.G., "Problems with Modeling Protein Ion-Exchange Chromatography," invited paper, Federation of Analytical Chemistry and Spectroscopy Societies, Cincinnati, OH, Oct. (1995).
29. **Pinto**, N.G. and Y.K. **Kao**, "Optimization of Preparative Chromatography using the Separation Vector," invited paper, PREP-95, 8th International Symposium on Preparative Chromatography, Washington, D.C., June (1995).
30. **Pinto**, N.G., "Protein Chromatography: An Engineer's Perspective," invited Seminar, Miami University, OH, May (1996).
31. **Raje**, P. and N.G. **Pinto**, "Protein Ion-Exchange Equilibria: Importance of Non-Ideal Effects," invited paper, PREP-96, 9th International Symposium on Preparative Chromatography, Washington, D.C., May (1996).
32. **Leng**, C.C. and N.G. **Pinto**, "Effects of Surface Properties of Activated Carbons On Adsorption Behavior of Phenol," poster presentation, American Carbon Society Workshop, Charleston, SC, June (1996).

33. **Liu, X.** and N.G. Pinto, "Adsorbed Phase Model for the Adsorption of Liquid Organics on Activated Carbon," poster presentation, American Carbon Society Workshop, Charleston, SC, June (1996).
34. Liu, X. and N.G. **Pinto**, "Adsorbed Phase Model for the Adsorption of Liquid Organics and Activated Carbon," Paper No. 116h, AIChE Meeting, Chicago, IL, Nov. (1996).
35. Leng, C.C. and N.G. **Pinto**, "Effects of Solutions pH on Surface Adsorption Characteristics of Activated Carbon," Paper No. 155d, AIChE Meeting, Chicago, IL, Nov. (1996).
36. **Raje, P.** and N.G. Pinto, "Incorporating Heat of Ion-Exchange Measurements in Modeling Overloaded Protein Chromatography," invited paper PREP-97, 10th International Symposium on Preparative Chromatography, Washington, D.C., May (1997).
37. Liu, X. and N.G. **Pinto**, "Adsorption of Phenol and Aniline on Activated Carbon," poster presentation, 10th Symposium on Separation Science and Technology for Energy Applications, Gatlinburg, TN, Oct. (1997).
38. **Pinto, N.G.**, "Protein Chromatography: An Engineer's Perspective," invited seminar, Kent State University, OH, Oct. (1997).
39. Chandavarkar, A. and N.G. **Pinto**, "Modeling the Adsorption of Proteins in Overloaded Ion-Exchange Chromatography," Fundamentals of Adsorption VI, Giens, France, May (1998).
40. **Chandavarkar, A.** and N.G. Pinto, "Modeling Ion-Exchange Displacement Chromatography of Proteins with Heat of Ion Exchange," invited paper PREP-98, 11th International Symposium on Preparative Chromatography, Washington, D.C., May (1998).
41. Franz, M., H.A. Arafat and N.G. **Pinto**, "An Investigation of the Effects of Chemical Surface Heterogeneity of Carbon on the Adsorption of Selected Liquid Organics," 3rd International Symposium on Surface Heterogeneity for Adsorption and Catalysis, Torun, Poland, Aug. (1998).
42. **Golubovic, N.C.**, Q. Kang, H.T. Henderson and N.G. Pinto, "MEMS Based Micro-Fluidic System for Chromatographic Analysis of Liquid Samples," SPIE 98, Santa Clara, CA, Sept. (1998).
43. **Arafat, H.A.** and N.G. Pinto, "An Investigation of the Mechanisms of Adsorption of Oxygen and Nitrogen Containing Aromatics on Activated Carbon, Paper No. 152c, AIChE Meeting, Miami, FL, Nov. (1998).
44. **Pinto, N.G.**, "Ion-Exchange Chromatography: The Challenges of Scale-up and Miniaturization," invited seminar, Technische Universitat Bergakademie Freiberg, Freiberg, Germany, Dec. (1998).
45. Esquibel-King, M., A.C. Dias-Cabral, J.A. Queiroz and N.G. **Pinto**, "An Investigation of Hydrophobic Interaction Chromatography using Flow Microcalorimetry," invited paper PREP-99, 12th International Symposium on Preparative Chromatography, San Francisco, CA, May (1999).
46. **Pinto, N.G.**, "Ion-Exchange Chromatography: The Challenges of Scale-up and Miniaturization," invited seminar, University of Toledo, OH, May (1999).
47. **Arafat, H.A.** and N.G. Pinto "Hydrogen Bonding in the Adsorption of Liquid Aromatics on Oxygen Containing Activated Carbon," 24th Biennial Conference on Carbon, Charleston, SC, July (1999).
48. **Arafat, H.A.**, B. Kontz, H.S. Rho, N.G. Pinto, P. Bishop and R. Buchanan, "Immobilization and Decomposition of Hazardous Organic Materials in Solidification/Stabilization Processes by Addition of Catalytic Activated Carbon," 24th Biennial Conference on Carbon, Charleston SC, July (1999).
49. **Kang, Q.**, N.C. Golubovic, H.T. Henderson and N.G. Pinto, "A Microseparator and Detector Integrated on a Silicon Chip for Ion-Exchange Chromatography," 11th Symp. Separation Science & Technology for Energy Applications, Gatlinburg, TN, Oct. (1999).

50. **Arafat**, H.A. and N.G. Pinto, "Enhancement of the Adsorption of Liquid Aromatics on Activated Carbon," Paper No.23g, AIChE Annual Meeting, Dallas, TX, Nov., (1999).
51. Liu, G., M.E. Thrash and N.G. **Pinto**, "Molecular Thermodynamic Model for Protein Chromatography," invited paper PREP-2000, 13th International Symposium on Preparative/Process Chromatography, Washington, D.C., May (2000).
52. **Thrash**, M.E. and N.G. Pinto, "Heat Adsorption Measurements for BSA Overloaded on a Reversed-Phase Support," PREP-2000, 13th International Symposium on Preparative/Process Chromatography, Washington, D.C., May (2000).
53. **Thrash**, M.E. and N.G. Pinto, "Characterization of Enthalpic Events in Overloaded Ion-Exchange Chromatography," PREP-2001, 14th International Symposium on Preparative/Process Chromatography, Washington, D.C., May (2001).
54. **Dias-Cabral**, A.C., J.A. Queiroz and N.G. Pinto, "Manipulation on Hydrophobic Interaction Adsorption of Bovine Serum Albumin on Polypropylene Glycol-Sepharose," poster presentation, PREP-2001, 14th International Symposium on Preparative/Process Chromatography, Washington, D.C., May (2001).
55. **Thrash**, M.E. and N.G. Pinto, "An Investigation of Non-Ideal Effects in Protein Ion Exchange Equilibria," AIChE Annual Meeting, Reno, NV, Nov. (2001).
56. **Lapizco-Encinas**, B. and N.G. Pinto, "Performance Characteristics of Novel Open Parallel-Plate Separator, AIChE Annual Meeting, Reno, NV, Nov. (2001).
57. Lapizco-Encinas, B. and N.G. **Pinto**, " Comparison of Preparative Characteristics of μ OPPS and Microbore Columns for Concentration of Trace Species by Displacement Chromatography," invited paper, PREP-2002 15th International Symposium on Preparative/Process Chromatography, Washington, D.C., June (2002).
58. **Thrash**, M.E. and N.G. Pinto, "An Analysis of the Interaction of BSA with an Anion Exchange Surface Using Van't Hoff Plots and Flow Microcalorimetry," PREP-2002 15th International Symposium on Preparative/Process Chromatography, Washington, D.C., June (2002).
59. Abu Daabes, M and N.G. **Pinto**, "Preliminary Results of an Investigation on The Feasibility of a Novel Chelating Adsorbent for the Control of Gaseous Mercury Emissions" invited paper, 19th Annual International Pittsburgh Coal Conference, Pittsburgh, PA, Sept. (2002).
60. Diogo, M.M., D.M.F. Prazeres, N.G. Pinto and J.A. **Queiroz** "Hydrophobic Interaction Chromatography of Homo-Oligonucleotides on Derivatized Sepharose CL-6B. Influence of Temperature." SPICA 2002, Heidelberg, Germany, Oct. (2002).
61. **Dias-Cabral**, A.C., A.S. Ferreira, N.G. Pinto and J.A. Queiroz, "Analysis of Protein Hydrophobic Interaction Adsorption on Polypropylene Glycol Sepharose," poster presentation, SPICA 2002, Heidelberg, Germany, Oct. (2002).
62. **Pinto**, N.G. "Chromatography for Process-Scale and Trace-Protein Purifications," invited seminar, University of Akron, Nov. (2002).
63. **Thrash**, M.E. and N.G. Pinto, "An Analysis of the Interaction of Biomolecules with Chromatographic Surfaces Using Van't Hoff Plots and Flow Microcalorimetry," AIChE Annual Meeting, Indianapolis, IN, Nov. (2002).
64. **Abu Daabes**, M. and N.G. Pinto, "An Investigation of the Feasibility of a Novel Chelating Adsorbent for the Control of Gaseous Mercury Emissions in Flue Gases," poster presentation, AIChE Annual Meeting, Indianapolis, IN, Nov. (2002).

65. Thrash, M. and N.G. **Pinto**, “Non-Electrostatic Effects Associated with Protein Adsorption in Ion-Exchange Chromatography,” invited paper, PREP-2003, 16th International Symposium on Preparative/Process Chromatography, San Francisco, CA, June (2003).
66. **Dias-Cabral**, A.C. A.S. Ferreira, J. Phillips, J.A. Queiroz and N.G. Pinto, “Relationships Between Equilibrium Adsorption Capacity of Bovine Serum Albumin on Polypropyleneglycol-Sepharose and Salt Concentration, Ligand Type and Temperature,” PREP-2003, 16th International Symposium on Preparative/Process Chromatography, San Francisco, CA, June (2003).
67. Phillips, J. and N.G. **Pinto**, “A Calorimetric Study of the Interactions of Homo-deoxyoligonucleotides with a Hydrophobic Interaction Support,” poster presentation, PREP-2003, 16th International Symposium on Preparative/Process Chromatography, San Francisco, CA, June (2003).
68. **Lapizco-Encinas**, B. and N.G. Pinto, “Characterization of Equilibrium Adsorption Behavior of Protein Salt Systems Using the H-Root Method: Comparison between Microseparators and Conventional Packed Columns,” poster presentation, PREP-2003, 16th International Symposium on Preparative/Process Chromatography, San Francisco, CA, June (2003).
69. **Abu Daabes**, M. and N.G. Pinto, “Gas Phase Chelating Sorbents for Removal of Mercury from Flue Gases,” Paper 324a, AIChE Annual Meeting, San Francisco, Nov. (2003).
70. Katiyar, A. L. Ji, P. Smirniotis and N.G. **Pinto**, “Tailoring Surface Functionality with Transition Metal Incorporated MCM-41 for Bioseparations,” Paper 322a, AIChE Annual Meeting, San Francisco, Nov. (2003).
71. **Ji**, L., A. Katiyar, N. Pinto and P. Smirniotis, “Al-MCM-41 Sorbents for Proteins. Some Remarkable Behavior of these Molecular Sieves,” Paper 326a, AIChE Annual Meeting, San Francisco, Nov. (2003).
72. Dolgoff, J., B. Xu, N. Pinto, G. **Lipscomb**, K. Pugh, S. Beltyukova, “Internet-based Unit Operations Laboratories in Membrane Separation Systems, Paper 501b, AIChE Annual Meeting, San Francisco, Nov. (2003).
73. **Dias-Cabral**, A.C., N. G. Pinto and J. A. Queiroz, “Determinants of Protein Retention Equilibrium Characteristics on Hydrophobic Interaction Chromatography,” 3rd Portuguese Chromatography Meeting, Lisbon, Portugal, Nov. (2003).
74. Katiyar, A., L. Ji, P. Smirniotis and N.G. **Pinto**, “Protein Adsorption Characteristics on Siliceous Mesoporous Sieves,” invited paper, PREP-2004, 17th International Symposium on Preparative/Process Chromatography, Baltimore, MD, May (2004).
75. Dias-Cabral A.C., J.A. **Queiroz** and N.G. Pinto, “An Analysis of the Enthalpic Effect Associated with Protein Adsorption in Hydrophobic Interaction Chromatography,” poster presentation, PREP-2004, 17th International Symposium on Preparative/Process Chromatography, Baltimore, MD, May (2004).
76. **Katiyar**, A., L. Ji, P. Smirniotis and N.G. Pinto, “Mesoporous Molecular Sieves for Size Selective Separation of Biomolecules,” Paper 676, 8th International Conference on Inorganic Membranes, Cincinnati, OH, July (2004).
77. **Katiyar**, A., L. Ji., P. Smirniotis and N.G. Pinto, “Toward Achieving Size-Selective Chromatographic Separations of Macro-biomolecules on SBA-15,” AIChE Annual Meeting, Austin, TX, Nov. (2004).
78. **Ji**, L., A. Katiyar, N.G. Pinto and P. Smirniotis, “Comparison of Adsorption Kinetics and Capacities for Mesoporous Silicates with Different Pore Structures,” AIChE Annual Meeting, Austin, TX, Nov. (2004).
79. **Zheng**, S., H. Jaladi, A. Katiyar, V. Gulians, N.G. Pinto and Y.S. Lin, “Immobilization of Pseudomonas Cepacia Lipase in Ordered Mesoporous Silica,” AIChE Annual Meeting, Austin, TX, Nov. (2004).

80. Katiyar, A., P. Smirniotis and N.G. **Pinto**, "Adsorption of Proteins on Fibrous and Spherical Mesoporous Molecular Sieve Silicates SBA-15," invited paper, PREP-2005, 18th International Symposium on Preparative/Process Chromatography, Philadelphia, PA, May (2005).
81. **Yadav**, S. G. Kasting and N.G. Pinto, "Study of Heat of Water Interaction in Human Stratum Corneum using Isothermal Calorimetry" poster presentation Gordon Research Conference on Barrier Function of Mammalian Skin, South Hadley, MA, Aug. (2005).
82. Katiyar, A., P. Smirniotis and N.G. **Pinto**, "Functionalized Nanoporous Molecular Sieves for Chromatographic Separations of Proteins," Paper 521b, AIChE Annual Meeting, Cincinnati, OH, Nov. (2005).
83. Abu Daabes, M. L. Ji and N.G. **Pinto**, "A Nanostructured Chelating Adsorbent for the Capture of Gaseous Mercury: Synthesis & Characterization," Paper 345b, AIChE Annual Meeting, Cincinnati, OH, Nov. (2005).
84. Jaladi, H., A. Katiyar, V.V. **Gulians** and N.G. Pinto, "Immobilization of Lipase Onto Mesoporous Silica: Study of Kinetic Parameters and Mass Transfer Effects Using a Continuous Micro Reactor Setup, Paper 289y, AIChE Annual Meeting, Cincinnati, OH, Nov. (2005).
85. **Yadav**, S. G. Kasting and N.G. Pinto, "Thermodynamics of Water Vapor Sorption on Human Stratum Corneum using Isothermal Calorimetry" Poster 148y, AIChE Annual Meeting, Cincinnati, OH, Nov. (2005)
86. Dolgoff, J., B. Xu, G. **Lipscomb**, K. Pugh, S. Beltyukova and N.G. Pinto, "Membrane Gas Separation through the Internet," Paper 552d, AIChE Annual Meeting, Cincinnati, OH, Nov. (2005).
87. Katiyar, A, P. Smirniotis and N.G. **Pinto**, "Nanoengineered Materials for Protein Separations" invited paper, ChemCon'05, 58th Annual Indian Session of the Institute of Chemical Engineers, New Delhi, India, Dec. (2005).
88. **Pinto**, N.G., "A Nanostructured Chelating Adsorbent for Capture of Gaseous Mercury," invited seminar, US EPA Research Laboratory, Durham, NC, Feb. (2006).
89. Katiyar, A. and N.G. **Pinto**, "Fundamental Investigation of Mesoporous Molecular Sieve Silicates Chromatographic Media for Preparative Bioseparations," invited paper, PREP-2006, 19th International Symposium on Preparative/Process Chromatography, Baltimore, MD, May (2006).
90. **Yadav**, S. G.B. Kasting and N.G. Pinto, "A Comparative Thermodynamic Study of the Interactions of Human Stratum Corneum and Its Components with Water," Paper 311h, AIChE Annual Meeting, San Francisco, CA, Nov. (2006).
91. **Katiyar**, A., H. Jaladi, V.V. **Gulians** and N.G. Pinto, "Unusual Interfacial Activation of *Burkholderia Cepacia* Lipase Immobilized in Nanopores of SBA-15 Silica," Paper 322e, AIChE Annual Meeting, San Francisco, CA, Nov. (2006).
92. **Katiyar**, A. and N.G. Pinto, "Fundamental Studies on Dual Mode Biomolecular Separations in Ordered Mesoporous Materials," Paper 325b, AIChE Annual Meeting, San Francisco, CA, Nov. (2006).
93. **Abu-Daabes**, M. and N.G. Pinto, "The Chemistry of Mercuric Chloride Reduction in Flue Gases of Coal Combustion, Paper 593b, AIChE Annual Meeting, San Francisco, CA, Nov. (2006).
94. Jaladi, H., A. Katiyar, V.V. **Gulians** and N.G. Pinto, "Effects of Mass-Transfer and Kinetic Parameters on Biocatalytic Activity of Immobilized *Burkholderia Cepacia* Lipase in a Packed-Bed Reactor," Paper 620d, AIChE Annual Meeting, San Francisco, CA, Nov. (2006).

95. **Ji**, L. S.W. Thiel and N.G. Pinto, "Pyrrolidinium Imides: Promising Ionic Liquids for Elemental Mercury Capture from Flue Gas," 37th Mid-Atlantic Industrial and Hazardous Waste Conference, Cincinnati, OH, March (2007).
96. **Katiyar** A., S.W. Thiel and N.G. Pinto, "Protein Adsorption on Ordered Mesoporous Silica: Interpretation Using Confocal Scanning Laser Microscopy (CSLM) and Flow Micro Calorimetry (FMC)," invited paper, PREP-2007, 20th International Symposium on Preparative/Process Chromatography, Baltimore, MD, May (2007).
97. **Katiyar**, A. V.V. Gulaints and N.G. Pinto, "Immobilization of *Burkholderia cepacia* Lipase on Ordered Mesoporous Silicas: Effects of Pore Structure on Hydrolytic Activity," Poster Presentation, PREP-2007, 20th International Symposium on Preparative/Process Chromatography, Baltimore, MD, May (2007).
98. **Yadav**, S., S.W. Thiel, G.B. Kasting and N.G. Pinto, "A Transient Heat of Water Vapor Sorption Model for Human Skin," Paper 12g, AIChE Annual Meeting, Salt Lake City, UT, Nov. (2007).
99. **Ji**, L. S.W. Thiel and N.G. Pinto, "Removal of Mercury from Flue Gases Using Ionic Liquid Coated Chelating Adsorbents," Paper 255c, AIChE Annual Meeting, Salt Lake City, UT, Nov. (2007).
100. **Yadav**, S., S.W. Thiel, G.B. Kasting and N.G. Pinto, "Probing the Interactions of Water with Naturally Smart Biopolymer "Human Skin", Poster 517r, AIChE Annual Meeting, Salt Lake City, UT, Nov. (2007).
101. Peise, O., L. Ji, S.W. **Thiel** and N.G. Pinto, "Advanced Adsorbents for Warm Gas Mercury Capture," ACS National Meeting, New Orleans, LA, April (2008).
102. Desch, R. J., A. Katiyar, S.W. **Thiel** and N.G. Pinto, "Protein Adsorption on Ordered Mesoporous Silica: Characterization of Intraparticle Diffusion Using Confocal Scanning Laser Microscopy," PREP-2008, 21st International Symposium on Preparative/Process Chromatography, San Jose, CA, June, (2008).
103. Ji, L., J. He, M. Khan, P.G. Smirniotis, S.W. **Thiel** and N.G. **Pinto**, "Simultaneous Removal of NO_x and Hg in a Low Temperature Selective Catalytic and Adsorptive Reactor," DOE URC Conference, Pittsburgh, PA, June (2008).
104. Darwish, A.M., R.J. Desch, S.W. **Thiel** and N.G. Pinto, "Size Selective Protein-Protein Separations using Mesoporous Silicates," PREP-2009, 22nd International Symposium on Preparative/Process Chromatography, Philadelphia, PA, July, (2009).
105. **Katiyar**, A., S.W. Thiel, V.V. Guiliants and N.G. Pinto, "Investigation of the Mechanism of Protein Adsorption on Ordered Mesoporous Silica using Flow Microcalorimetry," Poster Presentation, PREP-2009, 22nd International Symposium on Preparative/Process Chromatography, Philadelphia, PA, July, (2009).
106. Desch, R.J., A.M. Darwish, S.W. Thiel and N.G. **Pinto**, "Effects of pH and Ionic Strength on Adsorption of Proteins on Ordered Mesoporous Silica Visualized by Confocal Scanning Laser Microscopy," PREP-2009, 22nd International Symposium on Preparative/Process Chromatography, Philadelphia, PA, July, (2009).
107. Desch, R.J., A.M. Darwish, S.W. **Thiel**, V.V. Guliantis and N.G. Pinto, "Solution Effects on Protein Adsorption Mechanisms onto SBA-15," Paper 244f, AIChE Annual Meeting, Nashville, TN, Nov. (2009)
108. **Variyath**, S., J.S. Kim, S.W. Thiel, N.G. Pinto and V.V. Guliantis, "Molecular Dynamics of Pseudomonas Cepacia Lipase in Different Buffers and Correlations with its Biocatalytic Activity," Paper 180af, AIChE Annual Meeting, Nashville, TN, Nov. (2009).
109. Kim, J.S., S.W. **Thiel**, V.V. Gulaints and N.G. Pinto, "Biocatalysis using Lipase from Pseudomans Cepacia Immobilized on Functionalized Alumina," Paper 640g, AIChE Annual Meeting, Nashville, TN, Nov. (2009).
110. He, J., S.W. **Thiel**, P. G. Smirniotis and N.G. Pinto, "Adsorption of Gas-Phase Mercury using Ceria-Titania

- Materials,” Paper 544f, AIChE Annual Meeting, Nashville, TN, Nov. (2009).
111. **Desch**, R.J., S.W. Thiel and N.G. Pinto, “Energetics of Lysozyme Adsorption on Mesoporous Silica,” PREP-2010, 23rd Inter. Symp. on Preparative/Process Chromatography, Philadelphia, PA, May (2010).
 112. **Kim**, J. S., S.W. **Thiel**, V.V. Guliants and N.G. Pinto, “Influence of Surface Functionality on Biomolecule Immobilization and Enzymatic Activity of Mesostructured Cellular Foam Silica,” Paper 312d, AIChE Annual Meeting, Salt Lake City, UT, Nov. (2010).
 113. **Liu**, K., J. He, M.R. Whelen, S.W. **Thiel** and N.G. Pinto, “Supported Ionic Liquid Sorbent for Simultaneous Capture of Carbon Dioxide and Mercury,” Paper 440c, AIChE Annual Meeting, Salt Lake City, UT, Nov. (2010).
 114. **He**, J., S.W. Thiel, K. Reddy, P. Smirniotis and N.G. Pinto, “Simultaneous Removal of NO_x and Gas-Phase Mercury using Ceria-Titania Materials, Paper 573d, AIChE Annual Meeting, Salt Lake City, UT, Nov. (2010).
 115. **Liu**, K., S. W. Thiel and N. G. Pinto, “Slipstream Testing of Novel Mercury Adsorbents for Direct Warm-Gas Capture of Mercury From Coal Combustion Flue Gas,” Paper 45d, AIChE Spring Meeting and 7th Global Congress on Process Safety, Chicago, IL, (2011).
 116. **Desch**, R.J., S.J. Kim, S.W. Thiel and N.G. Pinto “Thermodynamic and Kinetic Modeling of Lysozyme Adsorption onto Mesoporous Silica, PREP-2011, 24th International Symposium on Preparative Process Chromatography, Boston, MA, July (2011).
 117. **Kim**, J.S., R.J. Desch, S.W. Thiel, V.V. Guliants and N.G. Pinto, “Effect of Salt Concentration and Surface Functionality on the Energetics of Protein Adsorption,” PREP-2011, 24th International Symposium on Preparative Process Chromatography, Boston, MA, July (2011).
 118. **Sridhar**, M., K. Reddy P. Smirniotis, S.W. Thiel and N. G. Pinto, “Template Directed Synthesis and Characterization of Tunable Mesoporous Polymer Resins, Paper 395a, AIChE Annual Meeting, Minneapolis, MN, Oct. (2011).
 119. **Thiel**, S.W., J. He and N.G. Pinto, “Adsorption of Gas-Phase Mercury and Arsenic Using Ionic Liquid Based Adsorbents,” Paper 488a, AIChE Annual Meeting, Minneapolis, MN, Oct. (2011).
 120. **Liu**, K., J. He, S.W. Thiel and N.G. Pinto, “Simultaneous Capture of Carbon Dioxide and Mercury From Coal Flue Gas by Using Supported Ionic Liquid Solid Sorbents,” paper 423d, AIChE Annual Meeting, Minneapolis, MN, Oct. (2011).
 121. **Desch**, R.J. J. S. Kim, S. W. Thiel and N. G. Pinto, “Interplay Between Salt Concentration and Surface Functionality for Lysozyme Adsorption Capacity and Energetics On Mesostructured Cellular Foam Silica,” Paper 634a, AIChE Annual Meeting, Minneapolis, MN, Oct. (2011).
 122. **Kim**, J.S., R. J. Desch, .W. Thiel, V. V. Guliants and N. G. Pinto, “Biocatalytic Activity and Energetics of Immobilized Bovine Carbonic Anhydrase On Mesostructured Cellular Foam Silica,” Paper 634b, AIChE Annual Meeting, Minneapolis, MN, Oct. (2011).

SERVICE

A. NATIONAL

Lightweight and Modern Metal Manufacturing Innovation Institute – Detroit, MI.
Workforce and Education Working Group, 2014 - 2015

B. STATE AND REGIONAL

State of Kentucky

Kentucky Council for Postsecondary Education
Council of Academic Officers 2015 - current

Speed Art Museum, Louisville, Kentucky
Member, Board of Trustees 2015 – current

Bluegrass Economic Advancement Movement (BEAM)
Engineering Workforce Committee, 2012 - 2014

Kentucky Board for Engineers and Land Surveyors (PE Board)
Board Member, 2011-present

Air Pollution Control Board of Jefferson County, Kentucky
Board Member, 2011-present

Greater Louisville Inc. - Advanced Manufacturing and Logistics Board
Board Member 2012 -present

State of Ohio

Governor Ted Strickland's Higher Education Transition Leadership Team, 2006.

Ohio Board of Regents
Advisory Council on Graduate Education, 2006-11.

State of Ohio Hazardous Waste Facility Board
Board Member, 1993-2003.

C. UNIVERSITY PANELS

Pennsylvania State University: Industrial and Professional Advisory Committee, Department of
Chemical Engineering, 2002-07.

Universidade da Beira Interior, Covilha, Portugal: Jury Member for Full Professor Candidate
(Juri das Provas de Agregacao), 2002.

D. EDITORIAL BOARD

Separation Science & Technology, 1997-2011

E. SERVICE TO PEER REVIEW (Selected)

National Science Foundation
Department of Energy
Petroleum Research Fund
AIChE Journal
Adsorption Journal
American Chemical Society Symposium Series
Journal of Chromatography
Langmuir
Carbon
Canadian Journal of Chemical Engineering
The Chemical Engineering Journal
Biotechnology and Bioengineering
Biotechnology Progress
Chemical Engineering Science
Chemical Engineering Communications
Reactive Polymers
Industrial and Engineering Chemistry Research
Hanser Publishers
Tulane University DOE/EPSCoR External Review Panel

F. COMMITTEE WORK AT UNIVERSITY OF LOUISVILLE

Belknap Engineering and Applied Sciences Research Park, Advisory Board (Chair), 2011-Present
Academic Technology Committee (Chair), 2013-15
21st Century University, Steering Committee, 2012-15
Decanal Review Committee College of Dentistry, 2012-13
Task Force of Tuition and Fee Setting, 2012-14
University Committee on Persistence to Graduation, 2012-15
Review Committee Vice President for Business Affairs, 2011-12
Administrative Efficiencies Workgroup, 2011-12
Council of Academic Officers, 2011-15

G. COMMITTEE WORK AT UNIVERSITY OF CINCINNATI (Selected)

University

Search Committee Dean of Nursing (Chair), 2010-11
Collegiate Restructuring –Department of Economics (co-Chair), 2010

Task Force for Competitive Graduate Funding (co-Chair), 2008
Task Force on Enrollment Management, 2008
Task Force on Graduate and Married Housing, 2008
Search Committee, Charles P. Taft Research Center Faculty Chair, 2008
Search Committee, Assoc. Senior Vice President for Business and Financial Affairs, 2008
University Diversity Council, 2007-11
University Academic Operations Committee, 2006-11
University Dean's Council, 2006-11
Strategic Enrollment Management Committee, 2006-11
University Graduate Council (Chair), 2006-11
Provost Reappointment Promotion and Tenure Committee, 2006-11
Charles P. Taft Research Center Executive Board, 2006-11
Performance Based Budgeting Task Force, 2006
Tuition, Discounting & Remission Task Force, 2006
Search Committee, Director Center for Enhancement of Teaching & Learning, 2006
University Graduate Standards Committee, 2003-11
BS/MD Faculty Admissions Committee, 2002
Graduate Faculty Nominations Committee, 1995-97
Biomedical Seed Grants Review Panel (Chair), 1994

College

MINE Department Head Search Committee (Chair), 2004
Material Science and Engineering Department Head Search Committee, 1999-2000
Resource Allocation Committee, 1995
COE Curriculum Committee, 1993-94
Task Force on Excellence in Undergraduate Engineering Education, 1993
College of Engineering Awards Committee, 1993
21st Century Curriculum Committee, 1991-92

H. ADVISER FOR STUDENT ORGANIZATIONS

University Graduate Student Governance Association 2005-10
Chemical Engineering Graduate Student Association 1994-1997
Engineering Tribunal 1994-96
AIChE Student Chapter 1986-1989

I. MEMBERSHIP IN PROFESSIONAL & HONOR SOCIETIES

American Institute of Chemical Engineers
American Chemical Society
American Society for Engineering Education
Tau Beta Pi Engineering Honor Society

J. ORGANIZATION OF SCIENTIFIC MEETINGS

1. “Nonlinear Wave Propagation: Theory and Application,” Symposium Nos. 239 and 240, AIChE Annual Meeting, Chicago, IL, 1990, Session Co-Chair.
2. “Chromatographic Engineering in Bioseparations,” Symposium No. 77, AIChE Annual Meeting, Los Angeles, CA, 1991, Session Co-Chair.
3. “Preparative Chromatography,” PREP-94, International Symposium, Washington, D.C., 1994, Session Chair.
4. “Preparative Chromatography, Ion Exchange, Adsorption/Desorption Processes and Related Techniques,” PREP-95, International Symposium, Washington, D.C., 1995, Session Chair.
5. “Preparative Chromatography, Ion Exchange, Adsorption/Desorption Processes and Related Techniques,” PREP-96, International Symposium, Washington, D.C., 1996, Session Chair.
6. “Surface Chemistry/Catalytic Properties of Activated Carbon,” American Carbon Society Workshop, Charleston, SC, 1996, Session Co-chairman.
7. “Preparative Chromatography, Ion Exchange, Adsorption/Desorption Processes and Related Separation Techniques,” PREP-2002, International Symposium, Washington, D.C., 2002, Session Chair.
8. International Symposium for Preparative Chromatography and Related Techniques, Scientific Advisory Committee, 2008-present.

K. INDUSTRIAL CONSULTING

Procter and Gamble, Cincinnati, OH, 1988-91
The BF Goodrich Company, Brecksville, OH 1996
American Laundry Machinery, Norwood, OH, 1996-00
Material Methods LLC, Newport, CA, 2002-04
Syracuse Investment Group, Syracuse NY, 2004-05
FIBRIQ, Loveland, OH, 2007-08