

## REFEREED JOURNAL PUBLICATIONS

### ACCEPTED FOR PUBLICATION

1. AF Lotus, SV Bhargava, ET Bender, EA Evans, RD Ramsier, DH Reneker, GG Chase, Electrospinning Route for Fabrication of P-N Junctions using Nanofiber Yarns, *J. Appl Phys.*, Accepted May 2009.

### PUBLISHED

2. A Genc, GG Chase, A Foos, Electrokinetic Removal of Manganese from River Sediment, *J Water Air Soil Pollution*, (2009), 197(1-4), 131-141. . DOI 10.1007/s11270-008-9796-7
3. JS Varahbas, GG Chase, DH Reneker, Electrspun Nanofibers from a Porous Hollow Tube, *Polymer* 49 (2008), pp. 4226-4229: 10.1016/j.polymer.2008.07.043
4. R. Bharadwaj, A. Patel, S. Chokdepanich and G.G. Chase, Oriented Fiber Filter Media, *J Engineered Fibers Fabrics*, Special Issue 2008 – Filtration, 29-34, 2008. <http://www.jeffjournal.org/>
5. S. Andan, S.I. Hariharan, and G.G. Chase, Continuum Model Evaluation of the Effect of Saturation on Coalescence Filtration, *Separation Science and Technology*, (2008), 43(8), 1955-1973.
6. S.J. Park, S. Bhargava, E.T. Bender, G.G. Chase, and R.D. Ramsier, Palladium Nanoparticles Supported by Alumina Nanofibers Synthesized by Electrospinning, *J Materials Research*, (2008), 23(5), 1193-1196.
7. G.G. Chase, P. Dachavijit, “An Experimental Study of Electrorheological Fluid Flow through a Packed Bed of Glass Beads,” *Transport in Porous Media*, 72, 25-35, 2008, DOI: 10.1007/s11242-007-9133-4
8. S. Dharmanolla, GG.Chase, Computer Program for Filter Media Design Optimization, *J Chinese Institute of Chemical Engineers*, 39 (2008) 161–167. doi: 10.1016/j.jcice.2007.11.002
9. S. Dawar, G.G. Chase, Drag correlation for axial motion of drops on fibers, *Sep & Purif , Separation and Purification Technology* 60 (2008) 6–13. doi:10.1016/j.seppur.2007.07.027
10. A.F. Lotus, E.T. Bender, E.A. Evans, R.D. Ramsier, D.H. Reneker and G.G. Chase, Electrical, Structural, and Chemical Properties of Semiconducting Metal-Oxide Nanofiber Yarns, *J Appl Physics*, 103, 024910, 2008. DOI: 10.1063/1.2831362. Also published in February 4, 2008 issue of *Virtual Journal of Nanoscale Science & Technology*, <http://www.vjnano.org>.
11. C.J. Thompson, G.G. Chase, A.L. Yarin, D.H. Reneker, Effects of Parameters on Nanofiber Diameter Determined from Electrospinning Model, *J. Polymer*, 48, 6913-6922, 2007. doi:10.1016/j.polymer.2007.09.017.
12. S. Dawar, H. Li, J.A. Dobson, G.G. Chase, “Drag Correlation of Drop Motion on Fibers,” *J. Drying Technology*, 24, 1283-1288, 2006, DOI: 10.1080/07373930600838082.
13. H. An, C. Shin, G. G. Chase, “Ion Exchanger Using Electrospun Polystyrene Nanofibers,” *J. Membrane Sci.*, 283, 84-87, 2006.
14. Bender, E. T.; Katta, P.; Chase, G. G.; Ramsier, R. D. Spectroscopic investigation of the composition of electrospun titania nanofibers. *Surface and Interface Analysis* (2007), 39(4), 374.

15. E.T. Bender, P. Katta, G.G. Chase, R.D. Ramsier, "Spectroscopic Investigation of the Composition of Electrospun Titania Nanofibers," *Surface and Interface Analysis*, 38(9), 1252 – 1256, 2006. Published Online, 19 Jun 2006, DOI 10.1002/sia.2383 <http://www3.interscience.wiley.com/cgi-bin/jissue/112751591>.
16. S.V. Doiphode, D.H. Reneker, G.G. Chase, "Nanofibers and Spheres by Polymerization of Cyanoacrylate Monomer," *Polymer Journal*, 47(12), 4328-4332, 2006.
17. E.T. Bender, P. Katta, A. Lotus, S.J. Park, G.G. Chase, R.D. Ramsier, "Identification of CO<sub>2</sub> clathrates in electrospun metal oxide nanofibers," *Chemical Physics Letters*, 423, 302-305, 2006.
18. C. Shin, G.G. Chase, "Separation of water-in-oil emulsions using glass fiber media augmented with polymer nanofibers," *J. Dispersion Science and Technology*, 27(4), 517-522, 2006.
19. C. Shin, G.G. Chase, Separation of liquid drops from air by glass fiber filters augmented with polystyrene nanofibers, *J Dispersion and Technology*, 27(1), 5-9, 2006.
20. C. Shin, H. An, G.G. Chase, Comparison of Ion Exchange Performance of Polystyrene Nanofiber Cation Exchanger and Glass Fibers Coated with Poly(styrene-co-divinylbenzene), *Chemical Engineering and Technology*, 29(3), 364-367, 2006.
21. O.O. Dosunmu, G.G. Chase, W. Kataphinan, D.H. Reneker, "Electrospinning of Polymer Nanofibers from Multiple Jets on a Porous Tubular Surface," *Nanotechnology*, 17, 1123-1127, 2006.
22. A.L. Yarin, W. Liu, S.V. Diophode, G.G. Chase, and D.H. Reneker, "Liquid Drop Growth on a Fiber," *AIChE J*, 52(1), 217-227, 2006.
23. C. Shin, G.G. Chase, "Coalescence Filtration in Layered Filter Media," *J. Residuals Science and Technology*, 2(2), 91-96, 2005.
24. C. Shin, G.G. Chase, Nanofibers from recycle waste expanded polystyrene using natural solvent, *Polymer Bulletin*, 55(3), 209-215, 2005.
25. GG Chase, P. Dachavijit, "A Correlation for Yield Stress Fluid Flow Through Packed Beds," *Rheologica Acta*, 44, 495-501, 2005, DOI 10.1007/s00397-004-0430-3.
26. C. Shin, D.H. Reneker, G.G. Chase, "The effect of nanofibers on liquid-liquid coalescence filtration," *AIChE J*, 51(12) 3109-3113, 2005. DOI 10.1002/aic.10564.
27. G. Vasudevan, S.I. Hariharan, G.G. Chase, "Modeling the Loading Stage in Coalescence Filtration," *J Porous Media*, 8 (3), 299-310, 2005.
28. C. Shin, G.G. Chase, and D.H. Reneker, "Recycled Expanded Polystyrene Nanofibers Applied in Filter Media," *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 262(1-3) 211-215, 2005.
29. V. Tomer, R. Trey-Mensah, J.C. Tokash, N. Stojilovic, W. Kataphinan, E.A. Evans, G.G. Chase, R.D. Ramsier, D.J. Smith, and D.H. Reneker, "Selective Emitters for Thermophotovoltaics: ERbia-modified Electrospun Titania Nanofibers," *Solar Energy Matl: Solar Cells*, 85(4), 477-488, 2005.
30. G. Zhang, W. Kataphinan, R. Teye-Mensah, P. Katta, L. Khatri, E.A. Evans, G.G. Chase, R.D. Ramsier, and D.H. Reneker, "Electrospun Nanofibers for Potential Space-Based Applications," *Material Science and Engineering B*, 116(3), 353-358, 2005.
31. G.G. Chase, D.H. Reneker, "Nanofibers in Filter Media," *FPSJ*, 16(2), 105-117, 2004.
32. C-G Shin and G.G. Chase, Wettability Effect on Droplet Attachment to Glass Rods, *FPSJ*, 16(1), 19-25, 2004.

33. W. Wang and G.G. Chase, "Effects of pH and alum concentrations on TiO<sub>2</sub> capture on cellulose fibers during co-filtration," *J. Chinese Institute of Chemical Engineers*, 35(1), 5-16, 2004.
34. C. Shin and G.G. Chase, "Water-in-oil coalescence in micro- nanofiber composite filters," *AIChE J*, 50(2) 343-350, 2004.
35. P. Katta, M. Alessandro, R.D. Ramsier, and G.G. Chase, "Continuous Electrospinning of Aligned Polymer Nanofibers onto a Wire Drum Collector," *Nano Letters*, 4(11), 2215-2218, 2004.
36. R.T. Mensah, V. Tomer, W. Kataphinan, J.C. Tokash, N. Stojilovic, G.G. Chase, E.A. Evans, R.D. Ramsier, D.J. Smith, and D.H. Reneker, "Erbia-modified electrospun titania nanofibers for selective infrared emitters", *J Phys Cond Mater*, 16, 7557-7564, 2004.
37. C. Shin and G.G. Chase, "The Effect of Wettability on Drop Attachment to Glass Rods," *J. Colloid and Interface Science*, 272(1), 186-190, 2004.
38. G. Vasudevan and G.G. Chase, "Performance of B-E glass fiber media in coalescence filtration. *J Aerosol Science*, 35(1), 83-91, 2004.
39. E.A. Stephan and G.G. Chase, "Use of Genetic Algorithms as an Aid in Modeling Deep Bed Filtration," *Computers and Chemical Engineering J.*, 27(2), 281-292, 2003.
40. G.G. Chase and P. Dachavijit, "Incompressible Cake Filtration of a Yield Stress Fluid," *Separation Science and Technology*, 38(4), 745-766, 2003.
41. M.G. Hajra, K. Mehta, and G.G. Chase, "Humidity, Temperature, and Polymer Nanofibers on Drop Coalescence in Glass Fiber Media," *Separation and Purification Technology*, 30 (1), 79-88, 2003.
42. G. Vasudevan, C.-G. Shin, B. Raber, A. Suthar, and G.G. Chase, "Modeling the start-up stage of Coalescence Filtration," *FPSJ*, 14(3), 169-176, 2002.
43. A. Suthar and G.G. Chase, "Performance of Meltbown, Media with Nanofibers," *Fluid Particle Separation Journal*, 14 (2), 58-64, 2002.
44. H.R. Patel, S.I. Hariharan, and G.G. Chase, "Evaluation of Steady Flow Through a Six-Lobe Sand Cartridge Filter by Boundary Perturbation Method," *J. Porous Media*, 5(1), 49-56, 2002.
45. E.A. Stephan and G.G. Chase, "A Preliminary Examination of Zeta Potential and Deep Bed Filtration Activity," *Separation & Purification Technology*, 21, 219-226, 2001.
46. G.G. Chase, "Permeable Flow in a Converging Disk, Part 1: Shape Factor," *Fluid Particle Separation Journal*, 13(2), 106-114, 2000.
47. G.G. Chase and T.L. Thome, "Permeable Flow in a Converging Disk, Part 2: Effective Permeability," *Fluid Particle Separation Journal*, 13(2), 115-128, 2000.
48. R. Reddy and G.G. Chase, "Use of Genetic Algorithms to Fit Filtration Data," *F/PSJ*, 13(1), 1-11, 2000.
49. E.A. Stephan and G.G. Chase, "Development of Volume Average Theory for Deep Bed Filtration," *AIChE J*, 46(10), 1918-1926, 2000.
50. G.G. Chase, V. Beniwal, and C. Venkataraman, "Measurement of Uni-Axial Fiber Angle in Non-Woven Fibrous Media," *Chem. Eng. Sci.* 55 (12), 2151-2160, 2000.
51. W. Wang and G.G. Chase, "Zeta Potential on Fines Retention in Co-Filtration," *F/PSJ*, 12(3), 161-172, 1999.

52. R. Vengimalla, G.G. Chase, and B.V. Ramarao, "Modeling of Filler Retention in Compressible Fibrous Media," *Separation & Purification Technology*, 15(2) 153-161, 1999.
53. S.K. Tonangi and G.G. Chase, "Acetone Extraction of 2,4 DNT from Contaminated Soil," *Separation and Purification Technology*, **16**(1), 1-6, 1999.
54. G.G. Chase, "Undergraduate Course on Solids Processing," *ChAPTER One Online*, website version of AIChE's *ChAPTER One* journal, **1** (1), <http://www.aiche.org/chapterone>, September 1998.
55. G.G. Chase and R. Benian, "Nozzle Spray Backwashing Filters," *Fluid Particle Separation Journal*, **11**(1), 1-10, 1998.
56. G.G. Chase and K. Jacob, "Undergraduate Teaching in Solids Processing and Particle Technology: An Academic/Industrial Approach," *CEE*, **32**(2), 118-121, 1998.
57. G.G. Chase, R.J. Boyapati, T. Johnson, and D.W. Ott, "Microscopic Observation of Filtration of Fluorescent Polymer Microspheres in a Bed of Cellulose Fibers Under Acidic and Alkaline Conditions," *Fluid Particle Separation Journal*, **10**(1), 28-36, 1997.
58. R. Vengimalla, G.G. Chase, and B. Ramarao, "Filler Particle Retention in Paper Fiber Beds," *Separation and Purification Technology*, **11**(1), 17-26, 1997.
59. G. A. Dragich and G.G. Chase, "Modeling Time Dependent Species Migration Through a Phosphogypsum Stack & the Effects of a Chemical Reaction," *Fluid Particle Separation Journal*, **10**(3), 191-202, 1997.
60. G.G. Chase and J. Kanel, "Jump Discontinuity Equations in Cake Filtration," *Separation Science and Technology*, **31**(5), 665-678, 1996.
61. I. Tosun, M.S. Willis, F. Desai, G.G. Chase, "Analysis of Drag and Particulate Stress in Porous Media Flows," *Int. J. Multiphase Flow*, **22** Suppl 1, 103- 1996
62. JM Giustino, G.G. Chase, and M.S. Willis, "Thermodynamic Separation Efficiency and Sedimentation Criteria for Multiphase Processes: A Comparison of Rigorous and Approximate Models," *Separations Technology*, **5** (3), 153-164, 1995.
63. G.G. Chase, "Thermodynamics Applied to Sedimentation," *Fluid/Particle Separation Journal*, **8**(2), 111-116, 1995
64. G.G. Chase, "Modeling of Dispersed Particulate Systems, Part 1. The Basics of Process Modeling," *Fluid/Particle Separation Journal*, **8**(1), 33-37, 1995.
65. G.G. Chase, "Modeling of Dispersed Particulate Systems, Part 2. Constitutive Models for Compressive Beds," *Fluid/Particle Separation Journal*, **8**(1), 38-46, 1995.
66. I Tosun, M.S. Willis, F. Desai, and G.G. Chase, "Analysis of Drag and Particulate Stress in Porous Media Flows," *Chem. Engr. Sci.* **50**(12), 1961-1969, 1995
67. S. Kodavanti, G.G. Chase, and W. Sisk, "Thickening of Clay Slurries by Periodic Pressure Flow Through a Porous Polyethylene Tube," *Separation Science and Technology*, **30**(4), 585-607, 1995.
68. G.G. Chase and J. Arconti, "Stress-Strain Relation of Compressive Solka Flocc Cakes," *J. Food Engineering*, **25**, 373-386, 1995.
69. G.G. Chase, J. Arconti, and J. Kanel, "The Effect of Filter Cakes on Filter Medium Resistance," *Separation Science and Technology*, **29**(16), 2179-2196, 1994
70. G.G. Chase, J. Steffen, and D. Ott, "Microscopic Observation of Filter Cake Formation," *Separations Technology*, **4** (2) 118-122, 1994.

71. G.G. Chase and J. Soma, "Liquid Flows Through Porous Media with Porosity Gradients," *Fluid/Particle Separation Journal*, **6**(4), 145-149, 1993.
72. I. Tosun, U. Yetis, M.S. Willis, and G.G. Chase, "Specific Cake Resistance: Myth or Reality?," *Wat. Sci. Tech.*, **28**(1), 91-101, 1993.
73. G.G. Chase, "Operating Line Analysis of Pump and Filtration Systems," *Filtration and Separations*, **30**(3), 241-246, 1993.
74. G.G. Chase, "Accounting for Pipe Loss When Comparing Centrifugal Pumps for Your Filtration Process," *Fluid/Particle Separation Journal*, **6**(2), 84-89, 1993.
75. G.G. Chase, "Closing the Education Gap in Fluid-Particle Processes," *Fluid/Particle Separation Journal*, **6**(1), 1-3, 1993.
76. L.-K. Ju and G.G. Chase, "Improved Scale-Up Strategies of Bioreactors," *Bioprocess Engineering*, **8**(1-2), 49-53, 1992.
77. G.G. Chase, "Unified Analysis of Compressive Packed Beds, Filter Cakes, and Thickeners," *Separation Science and Technology*, **27**(8&9), 1093-1114, 1992.
78. M.S. Willis and G.G. Chase, "A Strategy for Multiphase Processes," *Fluid/Particle Separation Journal*, **5**(2), 55-59, 1992.
79. G.G. Chase and M.S. Willis, "Compressive Cake Filtration," *Chem. Eng. Sci.* **47**(6), 1373-1381, 1992.
80. G.G. Chase and M.S. Willis, "Orthogonal Curvilinear Cake Filtration," *Sep. Sci. Technol.*, **26**(5), 689-715, 1991.
81. G.G. Chase and M.S. Willis, "Flow Resistance in Filter Cakes Due to Air," *Sep. Sci. Technol.*, **26**(1), 117-126, 1991.
82. M.S. Willis, F.N. Desai, G.G. Chase, and I. Tosun, "A Continuum Mechanics Analysis of Darcy's Law," *Fluid/Particle Separation Journal*, **3**(3), 137-142, 1990.
83. G.G. Chase, M.S. Willis, and J. Kannel, "Averaging Volume Size Determination of Electroconductive Porosity Probes," *Int. J. Multiphase Flow*, **16**(1), 103-112, 1990.
84. R.F. Savinell and G.G. Chase, "Analysis of Primary and Secondary Current Distributions in a Wedge-Type Aluminum-Air Cell," *J. Applied Electrochemistry*, **18**, 499-503, 1988.
85. G.G. Chase and M.S. Willis, "Dependence of the Symmetry of the Volume Averaged Partial Stress Tensor on the Symmetry at the Microscopic Scale," *Chem. Eng. Sci.*, **42**(12), 2974-2975, 1987.
86. R.F. Savinell and G.G. Chase, "Current Distributions in a Wedge-Type Aluminum-Air Single Cell," *J Electrochemical Society*, **132** (8): C336-C336 1985.

#### OTHER REFEREED PUBLICATIONS

87. C. Thompson, G.G. Chase, A.L. Yarin, D.H. Reneker, Effects of Parameters on Nanofiber Diameter Determined from Electrospinning Model, *Nanotechnology Research: New Nanostructures*, Xiaohua Huang ed., Nova Science Publishers, ISBN: 978-1-60021-902-3, Chapter 6, pp 223-242, 2007.
88. Chase, George G.; Mayer, Ernest. *Filtration. Kirk-Othmer Separation Technology* (2nd Edition) (2008), 2 1-76.
89. G.G. Chase and E. Mayer, "Filtration," *Kirk-Othmer Encyclopedia*, John-Wiley, [www.mrw.interscience.wiley.com/kirk/articles/filtsvar.a01/abstract.html](http://www.mrw.interscience.wiley.com/kirk/articles/filtsvar.a01/abstract.html), [www.mrw.interscience.wiley.com/kirk/articles/filtsvar.a01/toc.html](http://www.mrw.interscience.wiley.com/kirk/articles/filtsvar.a01/toc.html) Online posting date 14 March 2003.

90. G.G. Chase, "Transport Phenomena in Porous Media," in *Fluid Flow Handbook*, Chapter 21, J. Saleh editor, McGraw-Hill, New York, 2002.
91. G.G. Chase, E. Evans, C. Petty, M. Zhuang, K. Jayaraman, A. Benard, M. Amey, R. Mohan, O. Shoham, S. Shirazi, and K. Wisecarver, "NSF CRCD: Multiphase Transport Phenomena," Proceedings of the 2001 American Society for Engineering Education Annual Conference, Albuquerque, New Mexico, June 2001.
92. M.S. Willis, I. Tosun, W. Choo, G.G. Chase, and F. Desai, "A Dispersed Multiphase Theory and its Application to Filtration," in *Advances in Porous Media*, Volume 1, M.Y. Corapcioglu ed., Elsevier, Amsterdam, 1991.

#### OTHER JOURNAL PUBLICATIONS

1. S Andan and G G Chase, Coalescence Filter Media with Nanofibers, Oil and Gas, OTC.07 edition, 37, 2007.
2. G.G. Chase, P. Srinivasan, S. Andan, "Do Nanofibers Improve Filter Performance?," *Oil World*, 227(10), 95-98, 2006.
3. M.G. Hajra, S. Rangarajan, and G.G. Chase, "Effect of Nanofiber Diameter on Performance of Coalescing Filter Media," *Filtration News*, pp 14, 16, 18, 20, 22, January/February 2005.
4. G.G. Chase and E. Mayer, "Selection Guides for SLS Equipment," *Filtration News*, 21(3),18, 20, 22, 2003.
5. A. Suthar and G.G. Chase, "Nanofibers in filter media," *The Chemical Engineer*, **726**, 26-28, 2001.
6. K. Mehta, S. Rangarajan, and G.G. Chase, "Coalescence Filter Media Performance Testing – Effect of Process Parameters," *F/PSJ*, **13**(2), 129-135, 2000
7. G.G. Chase, C. Venkataraman, and V. Beniwal, "Measurement of Fiber Orientation in Filter Media," *Filtration News*, pp. 38, 40, 42, 47, May/June 1999.
8. R.V. Vengimalla and G.G. Chase, "Study of Filler Retention in Pre-formed and Forming Fibrous Media," *Filtration News*, **16**(2), 58-61, 1998.
9. G.G. Chase, "Multiphase Processes in Engineering Curricula," *Filtration News*, **13**(1), 2, 1995.
10. G.G. Chase, "Solids Education for Chemical Engineers," *Filtration News*, **15**(1), 33, 1997.
11. G.G. Chase, "Separations Technology," *Sep. Tech.*, **5**(3), 127, 1995.
12. G.G. Chase, "Match Centrifugal Pumps to Piping Systems," *Chemical Engineering*, 100(5), 151-152, 1993.

#### INVITED PRESENTATIONS

1. G.G. Chase, "Drop Motion on Fibers," Cummins Filtration, Stouten, WI, Aug 2007.
2. G.G. Chase, "Effect of Wettability on Coalescing Filter Performance," Cummins Filtration, Stouten, WI, Aug 2007.
3. G.G. Chase, "Filtration Research," BBA, Old Hickory, TN, Jan, 2006.
4. G.G. Chase, "Opportunities in Coalescence Filtration," Fleetguard, Maddison, WI, June 2004.
5. G.G. Chase, "A Quest for Predictive Filtration Models," Fluent Inc., Lebanon, New Hampshire, October 2003.
6. G.G. Chase, "High Temperature Nanofibers," ABB Lummus Global Inc, Bloomfield, NJ, October 2003.
7. G.G. Chase, "Filtration Fundamentals," ExxonMobil, Batan Rouge, March 2003.

8. G. G. Chase, "Nanofibers in Filter Media," Keynote address, Solid-Liquids Separations III, United Engineering Foundation, Davos, Switzerland, September 2001.
9. G.G. Chase, "Filtration Fundamentals," April 2000, Lubrizol Corporation, Wickliffe, Ohio.
10. G.G. Chase, Johansen-Crosby Chaired Professor Lecture, April 1999, "Integration of Particle Technology into Chemical Engineering," presented at Michigan State University.
11. G.G. Chase, "Fluid/Particle Separations Research at The University of Akron," Parker Hannifin, May 1999.
12. G.G. Chase, "Scale and Modeling Fluid/Particle Systems," presentation to Michigan State University Department of Chemical Engineering, Jan 1999.
13. G.G. Chase, "A Converging Disk Filter to Measure Filter Medium Resistance," presentation to DOW Chemical Company, June 1998.
14. G.G. Chase, "Industrial University Collaboration – Microscale Physiochemical Engineering Center (MPEC) at The University of Akron," presentation at the ESPRA meeting, Kings Island, Ohio, May 1997.
15. G.G. Chase, "Scale and Modeling of Fluid/Particle Systems," presented at Case Western Reserve University, Cleveland, Ohio, February 1996.
16. W. Jodi and G.G. Chase, "An Investigation of Water Dispersed Polymers in Binding Glass Fibers for use in Depth Filters and Coalescers," Air-Maze Corporation, Stow, Ohio, July 1995.
17. G.G. Chase, "Overview of Filtration and Solid/Liquid Separations," presented at the Basic Filtration and Separation Workshop at the Annual Meeting of the American Filtration and Separations Society, Chicago, May 1994.
18. G.G. Chase, "Modeling of Dispersed Particulate Systems," presented to the US Bureau of Mines, Tuscaloosa, Alabama, June 1994.
19. G.G. Chase, "Fluid/Particle Processes and Separations," presented to the Eastman Chemical Company, Kingsport, TN, October 1992.

#### PROCEEDINGS and PREPRINTS

1. S. Swaminathan, C. Loskofsky, GG Chase, Novel Catalytic Metal Oxide Nanofibers, American Chemical Society, Ceramics, Central Regional Meeting, Cleveland, Ohio, May 2009.
2. S. Swaminathan, GG Chase, Nanofibers for Filtration Applications, 1<sup>st</sup> place poster, American Filtration and Separations Society Annual Conference, Minneapolis, May 2009.
3. S. Swaminathan, GG Chase, Nanofiber Based Filter Media for Coalescence Filtration, American Filtration and Separations Society Annual Conference, Minneapolis, May 2009.
4. R. Bharadwaj, GG Chase, Effects of Fiber Orientation on Coalescence Filtration, American Filtration and Separations Society Annual Conference, Minneapolis, May 2009
5. S. Patel, P. Srinavatsan, GG Chase, Improving the Performance of Coalescing Filers, American Filtration and Separations Society Annual Conference, Minneapolis, May 2009
6. B. Raghavan, GG Chase, Modeling Microfiber Filter Performance by Augmentation with Nanofibers, American Filtration and Separations Society Annual Conference, Minneapolis, May 2009.
7. JS Varabhas, GG Chase, DH Reneker, Methods of Launching Electrospinning Jets, Nanofibers for the 3<sup>rd</sup> Millennium – Nano for Life conference, Prague, Czech Republic, March 2009.
8. GG Chase, Nanofiber Filtration: Beyond Physical Separation, Nanofibers for the 3<sup>rd</sup> Millennium – Nano for Life conference, Prague, Czech Republic, March 2009.
9. G.G. Chase, S. Dharmanolla, Model of Microfiber Coalescence Filters Augmented with Nanofibers, AIChE annual conference, Philadelphia, November 2008.

10. GG Chase, S Chokdeepanich, A Patel, R Bharadwaj, Oriented Fiber Filter Media, The Fiber Society, Montréal, Canada, October 2008.
11. S. Patel, G.G. Chase Effect of Gravity on Coalescence with and without drainage structure in horizontal orientation, American Filtration and Separations Society, 22<sup>th</sup> annual conference, Valley Forge, PA, May 2008.
12. J.S. Varabhas, G.G.Chase and D.H. Reneker, Electrospinning Jets Launched from Polymer Film, American Filtration and Separations Society, 22th annual conference, Valley Forge, PA, May 2008.
13. S. Andan, S.I. Hariharan, and G.G. Chase, Modeling of Saturation in Coalescence Filtration, American Filtration and Separations Society, 22th annual conference, Valley Forge, PA, May 2008.
14. S. J. Park, S. Bhargava, and G.G. Chase, Catalytic Filter Media Synthesis of Noble Metals Doped on Alumina Nanofibers American Filtration and Separations Society, 22th annual conference, Valley Forge, PA, May 2008.
15. S. Dharmanolla and G.G. Chase, Computer Program for Filter Media Design, Tech Textile conference, Session 104, Paper 6, Atlanta, April 2008.
16. S Dawar, GG Chase, Drag correlation for motion of liquid drops on fibers in coalescing filters, American Filtration and Separations Society, 21<sup>th</sup> annual conference, Orlando, March 2008.
17. R. Bharadwaj, G.G. Chase, Porous Media of Fibers and Spheres, American Filtration and Separations Society, 2007 Emission Solutions in Transportation, Ann Arbor, Michigan, October 16-18, 2007.
18. S.U. Patel, G.G. Chase, Effect of Grvity on Coalescence Filtration and Separation, American Filtration and Separations Society, 2007 Emission Solutions in Transportation, Ann Arbor, Michigan, October 16-18, 2007.
19. B. Raghavan, G.G. Chase, Model comparison of filter media for high temperature gas filtration, American Filtration and Separations Society, 2007 Emission Solutions in Transportation, Ann Arbor, Michigan, October 16-18, 2007.
20. S. Bhargava, S.J. Park, E.T. Bender, G.G. Chase, R.D. Ramsier, J. Finley, Catalytic Filter Media Made of Palladium Particles Supported on Alumina Nanofibers, Ohio Nanotechnology Summit, April 2007.
21. S. Dawar, H. Li, G.G. Chase, Correlation for Axial Motion of Barrel Drops on Fibers, Society of Automotive Engineers, Detroit, April 2007, 07PFL-425.
22. K. Moorthy, B. Newby, G.G. Chase, Removal of Water Drops from Viscor 1487 Oil, Society of Automotive Engineers, Detroit, April 2007, 07PFL-427.
23. G.G. Chase, Improved Microfiber Filter Performance by Augmentation with Nanofibers, Society of Automotive Engineers, Detroit, April 2007, 07PFL-429.
24. S.J. Park, S. Bhargava, E.T. Bender, G.G. Chase, R.D. Ramsier, "Ceramic Fibrous Filter Media Incorporated with Palladium Oxide Particles," American Filtration and Separations Society, 20<sup>th</sup> annual conference, Orlando, March 2007.
25. S. Dharmanolla and G. G.Chase, FiL2RO Program for Rapid Filter Media Design, American Filtration and Separations Society, 20th annual conference, Orlando, March 2007.
26. S.Andan, S.I.Hariharan and G.G.Chase, Modeling of drainage in coalescence filtration, American Filtration and Separations Society, 20th annual conference, Orlando, March 2007.
27. J.S. Varabhas, G.G. Chase, D.H. Reneker, Electrospun Nanofibers using a Porous Hollow Tube with Correlation Equation, Separations Processes for the Power Generation Industry, American Filtration and Separations Society, Pittsburgh, October 2006, P#7.
28. A.F. Lotus, and G.G. Chase, Synthesis of High Temperature Catalyst Supports by Electrospinning, Separations Processes for the Power Generation Industry, American Filtration and Separations Society, Pittsburgh, October 2006, P#5.

29. S. Dawar, G.G. Chase, Drop motion on fibers for different flow fields and surface properties, Separations Processes for the Power Generation Industry, American Filtration and Separations Society, Pittsburgh, October 2006, P#3.
30. S. Dharmanolla and G. G.Chase, FiL2RO Program for Rapid Filter Media Design, Separations Processes for the Power Generation Industry, American Filtration and Separations Society, Pittsburgh, October 2006, P#18.
31. S. Andan, S.I. Hariharan, and G.G. Chase, Loading Stage in Cylindrical Coordinates, Separations Processes for the Power Generation Industry, American Filtration and Separations Society, Pittsburgh, October 2006, P#4.
32. S.J.Park, S. Hariharan, G.G.Chase, Temperature profile in a catalytic filter for NO decomposition, Separations Processes for the Power Generation Industry, American Filtration and Separations Society, Pittsburgh, October 2006, P#12.
33. P. Katta, B. Raghavan and G. G. Chase, Affect of Temperature on Performance of Fibrous Filters, Separations Processes for the Power Generation Industry, American Filtration and Separations Society, Pittsburgh, October 2006, P#15.
34. D.H. Reneker, G.G. Chase, E.A. Evans, R.D. Ramsier, A. Buldum, G.W. Young, K.L. Kreider, S.I. Hariharan, K.J. Smith, A.L Yarin, Nanofiber Manufacturing for Energy Conservation, Proceedings of 2006 NSF Design, Service, and Manufacturing Grantees and Research conference, St. Louis, Missouri, 24-27 July 2006.
35. C. Shin, G.G. Chase, Separation of Water-in-Oil Emulsions by Microfiber and Nanofiber Composite Media, American Filtration and Separations Society, 19<sup>th</sup> annual conference, Chicago, April 2006.
36. S. Andan, S.I. Hariharan, G.G. Chase, Modeling of Steady Stage Coalescence Filtration with and without Nanofibers with Variations in Saturation, American Filtration and Separations Society, 19<sup>th</sup> annual conference, Chicago, April 2006.
37. S. Andan, S.I. Hariharan, G.G. Chase, Drainage Model in Coalescence Filtration, American Filtration and Separations Society, 19<sup>th</sup> annual conference, Chicago, April 2006.
38. S. Dawar, G.G. Chase, Drag Correlation of Drop Motion on Fibers, American Filtration and Separations Society, 19<sup>th</sup> annual conference, Chicago, April 2006.
39. P. Katta, G.G. Chase, Development of Ceramic Nanofiber Enhanced Filter Media for High Temperature Applications, American Filtration and Separations Society, 19<sup>th</sup> annual conference, Chicago, April 2006.
40. G.G. Chase, P. Srinivasan, S. Andan, "Modeling Filter Performance With and Without Nanofibers," Produced Water Seminar, Nassau Bay, TX, Jan 2006.
41. G.G. Chase, "Nanofibers for Automotive and Other Industries," Nano Applications, OAI, Cleveland, October 2005.
42. P. Katta and G.G. Chase, "Titania Nanofiber Enhanced Filter Media for Hot Gas Filtration," FILTECH 2005 International Conference, Wiesbaden, Germany, October 2005.
43. G.G. Chase, O.O. Dosunmu, W. Kataphinan, and D.H. Reneker, "Multijet Nozzle for Electrospun Nanofibers," American Filtration and Separations Society 2005 Diesel and Gas Engine Emissions Solutions and Filter Testing, Procedures and Equipment Conference, Ann Arbor, September 2005.
44. A.F. Lotus, S.J. Park, E.A. Evans, R.D. Ramsier, and G.G. Chase, "Synthesis of Ceramic Nanofibers," AFS 2005 Diesel and Gas Engine Emissions Solutions and Filter Testing, Procedures and Equipment Conference, Ann Arbor, September 2005.
45. S. Dawar and G.G. Chase, "Motion of Drops on Fibers," AFS 2005 Diesel and Gas Engine Emissions Solutions and Filter Testing, Procedures and Equipment Conference, Ann Arbor, September 2005.

46. A.R. Hopkins and G.G. Chase, "An Electric Field Method to Form Aligned Glass Microfiber Filter Media," AFS 2005 Diesel and Gas Engine Emissions Solutions and Filter Testing, Procedures and Equipment Conference, Ann Arbor, September 2005.
47. S. Andan, S. Hariharan, G.G. Chase, "Effect of Saturation Profile on Coalescence Filtration Model," AFS 2005 Diesel and Gas Engine Emissions Solutions and Filter Testing, Procedures and Equipment Conference, Ann Arbor, September 2005.
48. K. Moorthy, C.G. Shin, B. Newby, and G.G. Chase, "Effect of Wettability of Fibers on Liquid-Liquid Coalescence," AFS 2005 Diesel and Gas Engine Emissions Solutions and Filter Testing, Procedures and Equipment Conference, Ann Arbor, September 2005.
49. S. V. Doiphode and D. H. Reneker, The Maurice Morton Institute of Polymer Science; and G. G. Chase, "Nonwoven Nanofiber Filtration Media Made by Polymerization of Cyanoacrylate Monomer", AFS 2005 Diesel and Gas Engine Emissions Solutions and Filter Testing, Procedures and Equipment Conference, Ann Arbor, September 2005.
50. P. Srinivasan, G.G. Chase, "Steady State Filter Media Performance Modeling with and Without Nanofibers, American Filtration and Separations Society, 18<sup>th</sup> annual conference, paper M22.4, Atlanta, April 2005.
51. S. Dawar, G.G. Chase, "Motion of Drops on Fibers," AFS 2004 Advances in Filtration and Separation Media, Baltimore, MD, Nov 2004, paper AFS010.
52. D.H. Reneker, G.G. Chase, E.A. Evans, R.D. Ramsier, G.W. Young, A.B. Buldum, S.I. Hariharan, K.L. Kreider, D.J. Smith, A. Yarin, "Nanofiber Manufacturing for Energy Conversion and Utilization," Proceedings of the 2005 NSF DMII Grantees Conference, Scottsdale, Arizona, January 2005.
53. P. Srinivasan, G.G. Chase, "Modeling Filter Media Performance with and without Nanofibers," AFS 2004 Advances in Filtration and Separation Media, Baltimore, MD, Nov 2004, paper AFS011.
54. A.R. Patel, and G.G. Chase, "Control of Fiber Orientation in Non-woven Media by Electric Field," 9<sup>th</sup> World Filtration Congress, New Orleans, American Filtration Society, April 2004, 151-169.
55. P. Katta, L. Khatri, R.D. Ramsier, and G.G. Chase, "High Temperature nanofibers for Advanced Filtration Concepts," 9<sup>th</sup> World Filtration Congress, New Orleans, American Filtration Society, April 2004, 778-788.
56. C. Shin, G.G. Chase, and D.H. Reneker, "Separation of Liquid-Liquid Dispersions by Recycled Expanded Polystyrene Nanofibers Applied in Filter Media," 9<sup>th</sup> World Filtration Congress, New Orleans, American Filtration Society, April 2004, 1879-1900.
57. G. Vasudevan, B. Raber, S.I. Hariharan, and G.G. Chase, "Modeling the Unsteady Coalescence Stage of Coalescence Filtration," 9<sup>th</sup> World Filtration Congress, New Orleans, American Filtration Society, April 2004, 1217-1232.
58. P. Katta, L. Khatri, R.D. Ramsier and G.G. Chase, "Titania nanofibers for high temperature filtration," American Filtration and Separations Society, Fall 2003 Topical Conference, Diesel and Gas Engine Emission Solutions, 29 Sept. – 2 Oct., Ann Arbor, 2003.
59. L. Khatri, R.D. Ramsier, and G.G. Chase, "Zeolite Nanofibers for Diesel Engine Filters," American Filtration and Separations Society, Fall 2003 Topical Conference, Diesel and Gas Engine Emission Solutions, 29 Sept. – 2 Oct., Ann Arbor, 2003.
60. G. Vasudevan, S.I. Hariharan, G.G. Chase, "Modeling the Loading Stage in Coalescence Filtration," American Filtration and Separations Society, 16<sup>th</sup> Annual Conference, Reno, Nevada, 16, 416-434, June 2003.
61. P. Katta, L. Khatri, R.D. Ramsier, G.G. Chase, "Metal Oxides for Synthesizing High Temperature Fibers," American Filtration and Separations Society, 16<sup>th</sup> Annual Conference, Reno, Nevada, Volume 16, 326-339, June 2003.

62. C. Shin and G.G. Chase, "The Effect of Wettability on Coalescence Filtration," American Filtration and Separations Society, 16<sup>th</sup> Annual Conference, Reno, Nevada, Volume 16, 405-415, June 2003.
63. H.V. Nemmara and G.G. Chase, "Adsorption onto Conductive Nanofibers Under Applied Electric Currents," American Filtration and Separations Society, 16<sup>th</sup> Annual Conference, Reno, Nevada, Volume 16, 318-325, June 2003.
64. G.G. Chase and P. Dachavijit, "Incompressible Cake Filtration of a Yield Stress Fluid," 2002 The Symposium of Transport Phenomena and its Applications/Membrane Separation Forum, Taipei, Taiwan, November 2002.
65. H. Nemmara and G.G. Chase, "Activated Carbon Nanofibers and Carbon Nanotubes for Chloroform Adsorption," American Filtration and Separations Society, Indoor Air Quality-Filtration Conference, Cincinnati, November, 2002, Section 1 Paper 3.
66. G.Vasudevan and G.G.Chase, "A Novel B-E-glass Media For Coalescence Filtration," American Filtration and Separations Society, Indoor Air Quality-Filtration Conference, Cincinnati, November, 2002, Section 4 Paper 3.
67. A. Suthar and G.G. Chase, "Performance of Meltblown Media with Nanofibers," *Advances in Filtration and Separation Technology*, Volume 15, 265-273, Galveston, TX, April 2002.
68. G. Vasudevan, C.-G. Shin, B. Raber, A. Suthar, and G.G. Chase, "Modeling Coalescence in Non-woven Media with and without Nanofibers," *Advances in Filtration and Separation Technology*, Volume 15, 772-783, Galveston, TX, April 2002.
69. P. Dachavijit and G.G. Chase, "Yield Stress Fluid Flow in Packed Beds," *Advances in Filtration and Separation Technology*, 15, 1-9, Galveston, TX, April 2002.
70. NSF - CRCD PROJECT ON MULTIPHASE TRANSPORT PHENOMENA, R. Mohan (Speaker), O. Shoham, S. Shirazi, K. Wisecarver, The University of Tulsa; C. Petty, M. Zhuang, K. Jayaraman, A. Benard, S. Parks, S. Shao, M. Amey, Michigan State University; G. Chase, Ed Evans, The University of Akron; Presented at the XXI Oklahoma AIAA/ASME Symposium, February 24, 2001, The University Of Tulsa, Tulsa
71. G.G. Chase, C. Petty, R. Mohan, "NSF-CRCD: Multiphase Transport Phenomena," ASEE 2001 Annual Conference & Exposition, Albuquerque, New Mexico, June 2001.
72. H.V. Nemmara and G.G. Chase, "Influence of Nanofibers on Coalescence Filtration of Oil Aerosols," *Advances in Filtration and Separation Technology*, Volume 15, S-H Chiang and S. E. Lee editors, American Filtration and Separations Society, Tampa, Florida, April 2001, poster paper 1.
73. V.V. Fernandes and G.G. Chase, "Characterizing three-dimensional fiber orientation of non-woven filter media and evaluating its performance," *Advances in Filtration and Separation Technology*, Volume 15, S-H Chiang and S. E. Lee editors, American Filtration and Separations Society, Tampa, Florida, April 2001, poster paper 5.
74. S. Rangarajan, G.G. Chase, D.H Reneker, and W. Liu, "An Introduction to Electrospun Polymer Nanofibers," *Advances in Filtration and Separation Technology*, Volume 15, S-H Chiang and S. E. Lee editors, American Filtration and Separations Society, Tampa, Florida, April 2001, paper 5-4.
75. H.R. Patel and G.G. Chase, "Migration of clay in flows of oil-water mixtures through sand filters," Paper 17162, Proceedings of ETCE 2001, Engineering Technology Conference on Energy, February 2001, Houston, TX
76. W. Wang and G.G. Chase, "Using Zeta Potentials to Characterize Filter Performance," *Advances in Filtration and Separation Technology*, Volume 14, N. Bugli, W. Chen, and S. Reynolds eds., American Filtration and Separations Society, Myrtle Beach, March 2000, 431-438.
77. S. Chokepanich and G.G. Chase, "Microscopic Observation of Droplet Coalescence in a Fiber Matrix," *Advances in Filtration and Separation Technology*, Volume 14, N. Bugli, W. Chen, and S. Reynolds eds., American Filtration and Separations Society, Myrtle Beach, March 2000, 851-856.

78. K. Mehta, S. Rangarajan, and G.G. Chase, "Coalescence Filter Media Performance Testing-Effect of Process Parameters," *Advances in Filtration and Separation Technology*, Volume 14, N. Bugli, W. Chen, and S. Reynolds eds., American Filtration and Separations Society, Myrtle Beach, March 2000, 224-231.
79. W. Wang and G.G. Chase, "Zeta Potential on Fines Retention in Co-Filtration," Preprint, American Institute of Chemical Engineers, Annual Meeting, Dallas, TX, November 1999.
80. S. Rangarajan, G.G. Chase, and K. Mehta, "Nanofibers in Coalescer Filter Media," in *Proceedings: Air Filtration Conference*, American Filtration and Separations Society, Minneapolis, 177-185, October 1999.
81. C. Venkataraman and G.G. Chase, "Effect of Fiber Orientation on Permeability and Capture Efficiency of Filter Media," in *Advances in Filtration and Separation Technology*, **13B**, 825-832, 1999.
82. W. Wang and G.G. Chase, "Modifying Zeta Potentials to Improve Fines Retention," in *Advances in Filtration and Separation Technology*, **13B**, 907-916, 1999.
83. K. Mehta, S. Rangarajan, J. Liu, and G.G. Chase, "Development of Novel Filter Media for Coalescence and Compressed Air Filtration," *Advances in Filtration and Separation Technology* **13B**, 933-939, 1999.
84. V. Beniwal and G.G. Chase, "Characterizing Fiber Orientation in Filter Media," in *Advances in Filtration and Separation Technology*, **12**, 8-12, 1998.
85. G.G. Chase, "Correlations for Comparing Effective Permeabilities," in *Advances in Filtration and Separation Technology*, **12**, 398-403, 1998.
86. C. Venkataraman and G.G. Chase, "Filter Media with Fibers Oriented in the Z Direction," in *Advances in Filtration and Separation Technology*, **12**, 28-32, 1998. First Place Poster Paper.
87. W. Wang and G.G. Chase, "Modifying Zeta Potential to Control Fines Retention," in *Advances in Filtration and Separation Technology*, **12**, 33-37, 1998.
88. E.A. Stephan and G.G. Chase, "Prediction of Permeability Loss by Zeta Potential," Produced Water Seminar, Clear Lake, Texas, January 1998.
89. E. Stephan and G.G. Chase, "Modeling Permeability Decline in Sandstone Formations," *Drilling & Completion Fluid Filtration: New Materials and Technology*, American Filtration and Separations Society, pp39-49, Lafayette, La, July 1997.
90. R. Vengimalla and G.G. Chase, "Modeling of Filler Retention in Compressible Fibrous Media," AICHE Annual Meeting, Los Angeles, November 1997.
91. E.A. Stephan and G.G. Chase, "Predicting Permeability Decline in Sandstone Formations Utilizing Filtration Theory," AICHE Annual Meeting, Los Angeles, November 1997.
92. P.R. Holcomb and G.G. Chase, "Pressure Drop Through A Parallel Fiber Bed," in *Advances in Filtration and Separation Technology*, **11**, 18-22, 1997. First Place Poster Paper.
93. S.C. Schapel and G.G. Chase, "Modeling of Hydrocyclone Flows with Permeable Walls," in *Advances in Filtration and Separation Technology*, **11**, 33-36, 1997.
94. G.G. Chase and R. Benian, "Nozzle Spray Backwashing Filters," in *Advances in Filtration and Separation Technology*, **11**, 519-525, 1997. Best paper award – Membrane applications.
95. V. Beniwal and G.G. Chase, "Design of a Water Permeability Tester," in *Advances in Filtration and Separation Technology*, **11**, 13-16, 1997.
96. R. Vengimalla, G.G. Chase, B.V. Ramarao, and S. Das, "Filler Retention in Pre-Formed Fibrous Media," *Eng. Papermakers: Form Bonds Better Paper Making*, *TAPPI*, **3**, 1435-1499, 1997.

97. R. Vengimalla and G.G. Chase, "A Study of Filler Retention in preformed Fibrous Media - Depth Filtration," AICHE Annual Meeting, Chicago, November 1996
98. E.A. Stephan and G.G. Chase, "A Volume-Average Scale Model for Fines Migration in Sandstone," AICHE Symposium Series, Advances in Fluidization and Fluid-Particle Systems, 317, 72-76, 1997.
99. G.G. Chase, "An Investigation of Recovery of Acetone from Soil Extraction," in *Terrestrial Sciences Program Project Descriptions*, US Army Research Office, 54-55, 1996.
100. V.K.N. Yerra, G.G. Chase, and C. Aherns, "A Study of Foam Flow in Porous Media and its Applications," in *Advances in Filtration and Separation Technology*, **10**, 55-60, 1996.
101. G.G. Chase and P. Baru, "Study of Wall Effects in Packed Beds," in *Advances in Filtration and Separation Technology*, **10**, 363-368, 1996.
102. W. Jodi, G.G. Chase, and S.B. Linnersten, "Water-based Polymer Binders for Coalescing Filters," in *Advances in Filtration and Separation Technology*, **10**, 40-44, 1996.
103. S. Tonangi, R. Boggavarapu, G.G. Chase, and W. Sisk, "Leaching of Energetics from Soils Using Acetone," in *Advances in Filtration and Separation Technology*, **10**, 438-442, 1996.
104. R. Boggavarapu, S. Tonangi, G.G. Chase, and W. Sisk, "Recovery of Acetone from Solvent Extraction of Lagoon Sediment," in *Advances in Filtration and Separation Technology*, **10**, 452-456, 1996.
105. E.A. Stephan and G.G. Chase, "Modeling of Permeability Reduction in Sandstone Formations due to Fines Migration," preprint, Produced Water Conference, League City, TX, January 1996.
106. R. Vengimalla, G.G. Chase, and B.V. Ramarao, "A Model for Drainage and Fine Particle Retention in Static Formers," preprint, AICHE Annual Meeting, Miami, November 1995.
107. R.J. Boyapati, G.G. Chase, and T. Johnson, "Microscopic Observation of Filter Cake Formation," in *Advances in Filtration and Separation Technology*, **9**, 341-348, 1995.
108. W. Jodi and G.G. Chase, "Water-Dispersed Polymer Adhesion on Glass Fibers," in *Advances in Filtration and Separation Technology*, **9**, 26-30, 1995.
109. J.M. Giustino and G.G. Chase, "Thermodynamics Applied to Separations" in *Advances in Filtration and Separation Technology*, **9**, 292-300, 1995.
110. R. Boggavarapu, G.G. Chase, and W. Sisk, "A Study of Freezing and Vacuum Flashing to Recover Acetone from Acetone-Water-Energetic Mixtures," in *Advances in Filtration and Separation Technology*, **9**, 31-36, 1995.
111. G.G. Chase and B.J. Scheiner, "Modeling of Contaminant Migration Through a Phosphogypsum Stack," in *Advances in Filtration and Separation Technology*, **9**, 770-777, 1995.
112. G.G. Chase and J. Kanel, "Jump Discontinuities in Dispersed Multiphase systems with Application of Cake Filtration," in *Advances in Filtration and Separation Technology*, **8**, 198-202, 1994.
113. S. Kodavanti, G.G. Chase, and W. Sisk, "Thickening of Clay Slurries by Periodic Pressure Flow Through a Porous Polypropylene Tube," in *Advances in Filtration and Separation Technology*, **8**, 438-443, 1994.
114. G.G. Chase and J. Soma, "Pressure Gradients in Flows Through Porous Wire Mesh With Non-Uniform Porosity," *Advances in Filtration and Separation Technology*, **7**, 1-4, 1993.
115. J. Arconti and G.G. Chase, "Use of Local Measurements to Analyze the Drag Force and Stress-Strain Relation for Compressive Packed Beds," *Advances in Filtration and Separation Technology*, **7**, 657-660, 1993.
116. G.G. Chase, "Size Centrifugal Pumps to Your Filtration Process," *Advances in Filtration and Separation Technology*, **6**, 119-123, 1992.

117. J. Soma and G.G. Chase, "Two-Phase Flow in Porous Media," *Advances in Filtration and Separation Technology*, **6**, 587-591, 1992.
118. G.G. Chase, "Engineering Science and Fluid/Particle Separation," *Advances in Filtration and Separation Technology*, **5**, 314-318, 1991.
119. G.G. Chase and M.S. Willis, "Elastic Filter Cake Model that Accounts for Specific Surface Area Affects on the Interphase Drag Force," *Advances in Filtration and Separation Technology*, **4**, 92-96, 1991.
120. M.S. Willis and G.G. Chase, "Engineering Science and Multiphase Processes," *Advances in Filtration and Separation Technology*, **4**, 87-91, 1991.
121. G.G. Chase, M.S. Willis, and I. Tosun, "Sludge and Wastewater Filtration: A Continuum Analysis," in *Solid/Liquid Separation: Waste Management and Productivity Enhancement*, Battelle Press, Columbus, Ohio, 1990.
122. G.G. Chase, M.S. Willis, and J. Kannel, "Averaging Volume Size of Electroconductive Porosity Probes," *Advances in Filtration and Separation Technology*, **1**, 303-309, 1990.

PRESENTATIONS (Not published in archivable proceedings)

1. V Raja, GG Chase, B Jones, Computational Modeling and Analysis of Shale Shaker Dynamics, Produced Water Society Seminar, Nassau Bay, TX, Jan 2009.
2. PS Kulkarni and GG Chase, Wettability Characterization of Filter Media using Modified Washburn Equation, Produced Water Society Seminar, Nassau Bay, TX, Jan 2009.
3. SN Tacastacas, MJ Pinti, N Stofilovic, AF Lotus, GG Chase, XRD and DRIFTS Study of Titania/Zinc Oxide Nanofibers, OSAPS conference Dayton, OH, Oct. 2008.
4. GG Chase, Developments in Coalescence Filtration, Cummins Filtration 1<sup>st</sup> Annual Filtration Conference, Warsaw, Poland, September 2008.
5. N Bjelac, N Schafer, Nenad Stojilovic, S-J Park, GG Chase, Microscopy of Metal Oxide Nanofibers, Ohio-Region Section of the American Physical Society, Dayton, Ohio, October 2008.
6. GG Chase, CA Petty, Produced Water Management, Produced Water Society Seminar, Nassau Bay, TX, 16-18 Jan 2008.
7. P.S. Kulkarni, K. Moorthy, B. Newby, G.G. Chase, Effect of Surface Wettability on Liquid-Liquid Coalescence, Produced Water Society Seminar, Nassau Bay, TX, 16-18 Jan 2008.
8. A.F. Lotus, E.A. Evans, R.D. Ramsier, D.H. Reneker, G.G. Chase, Fabrication, Characterization, and Electrical Properties of Ceramic Nanofiber Yarns by Electrospinning, AIChE annual conference, Salt Lake, Nov 2007.
9. S. Dharmanolla and G.G. Chase, Computer Program for Filter Media Design Optimization, AIChE annual conference, Salt Lake, Nov 2007.
10. S.J. Park, B. Raghavan, S. Bhargava, and G.G. Chase, Ceramic Nanofiber Filter Media, AIChE annual conference, Salt Lake, Nov 2007.
11. S. Dawar, G.G. Chase, Drag Correlation for Drop Motion in Filters with Surface Properties and Flow Fields, Conference for Undergraduate and Graduate Student Research, The University of Akron, Feb 2007.
12. K. Moorthy, B. Newby, G.G. Chase, Removal of Water Drops from Viscor Oil, Produced Water Society Seminar, Nassau Bay, TX, 17-19 Jan 2007.
13. D.H. Reneker, G.G. Chase, E.A. Evans, R.D. Ramsier, A. Buldum, G.W. Young, K.L. Kreider, S. I. Hariharan, D.J. Smith, A.L. Yarin, Nanofiber Manufacturing for Energy Conversion and Utilization, NSF NIRT conference, Alexandria, VA, Dec 2006.

14. G.G. Chase, Electrospun Nanofiber Enhanced Filter Media, INDA, Filtration 2006 conference, Philadelphia, November 2006.
15. S. Dawar, G.G. Chase, Drag Correlation including Surface Properties for Motion of Drops on Fibers, AICHE, Orlando, 24 April 2006.
16. G.G. Chase, Electrospun Nanofiber Enhanced Filter Media, Nebraska Research Expo and Innovation Forum, Lincoln, NB, 29 March 2006.
17. P. Srinivasan and G.G. Chase, Coalescence Filter Model Performance of Glass Fiber Media with and without Nanofibers, AICHE Annual Conference, Cincinnati, October 2005.
18. S. Dawar and G.G. Chase, Drag Correlation of Drop Motion on Fibers, AICHE Annual Conference, Cincinnati, October 2005.
19. G.G. Chase, Nanofibers for Automotive and Other Industries, Nano-App Summit 2005, Cleveland, 17-19 October 2005
20. C. Shin and G. G. Chase, Polystyrene Nanofibers for Cation Exchange, Produced Water Seminar, Nassau Bay, TX, 19-22 Jan 05
21. A. Patel and G.G. Chase, "Control of Glass Fiber Orientation in non-Woven Media by Electric Field," AICHE Annual Conference, Austin, TX, November 2004.
22. P. Katta, L. Khatri, R.D. Ramsier and G.G. Chase, Synthesis and Characterization of Titania Nanostructures, AICHE Annual Conference, Austin, TX, November 2004.
23. C. Shin and G.G. Chase, "Polymer Nanofibers from Recycling of Waste Expanded Polystyrene," Produced Water Seminar, Nassau Bay, TX, 21-24 Jan 04.
24. L. Khatri, M. Alesandro, E.Evans, R. Ramsier, and G.G. Chase, , "Alignment of Electrospun Nanofibers," AICHe Annual Conference, San Francisco, November 2003.
25. C. Shin and G.G. Chase, "Performance of Layered Filter Media in Coalescence Filtration," AICHe Annual Conference, San Francisco, November 2003.
26. L. Khatri, R.D. Ramsier, and G.G. Chase, "High Temperature Nanofibers," AICHe Annual Conference, San Francisco, November 2003.
27. C. Shin and G.G. Chase, "Water-in-oil coalescence using galas filber filters augmented with polymer nanofibers," Produced Water Seminar, Nassau Bay, Texas, January 2003.
28. "NSF Combined Research Curriculum Development on Multiphase Transport Phenomena: A CFD Design Adventure", Steven M. Parks and Charles A. Petty (presenter), Mei Zhuang, Marilyn J. Amey, George G. Chase, and Ram S. Mohan, International Conference on Engineering Education ICEE-2002, UMIST, Manchester, Great Britain, August 18-22, 2002.
29. P. Dachavijit, and G. G. Chase, "Yield Stress Fluid Flow Through Packed Beds," IFPRI meeting, Case Western Reserve, April 2002.
30. G.G. Chase and D. H. Reneker, "Nanofibers in Filter Media," Produced Water Seminar, Nassau Bay, Texas, January 2002.
31. P. Dachavijit and G.G. Chase, "A Modified Ergun Equation for Yield Stress Fluid Flow Through Packed Beds," Produced Water Seminar, Nassau Bay, Texas, January 2002.
32. M.J. Amey, S.M. Parks, C.A. Petty, M. Zhuang, G.G. Chase, and R.S. Mohan, "NSF Combined Research Curriculum Development on Multiphase Transport Phenomena: A Web Base Teaching Adventure," AICHE Annual Meeting, Reno, November 2001.
33. M.G. Harjra, S. Rangarajan, and G.G. Chase, "Nanofibers in Coalescing Filter Media," AICHE Annual Meeting, Reno, November 2001.
34. G.G. Chase, S. Chokdeepanich, and A. Yarin, "Drag Coefficient for Droplet Migration Along Fibers," AICHE Annual meeting, Reno, November 2001.

35. C.A. Petty, S.M. Parks, M. Zhuang, G.G. Chase, R. Mohan, and M.J. Amey, "NSF/CRCD on Multiphase Transport Phenomena, AICHE Annual meeting, Reno, November 2001.
36. G.G. Chase and P. Dachavijit, "Model for Yield Stress Fluid Flow Through a Packed Bed," Solid-Liquids Separations III, United Engineering Foundation, Davos, Switzerland, September 2001.
37. H. R. Patel and G. G. Chase, "Hydrodynamic Performance of Six Lobe Sand Filters," Produced Water Seminar, Nassau Bay, Texas, January 2001.
38. S. Chokdepanich and G.G.Chase, "The effect of fiber orientation on coalescence filter media performance," AICHE 2000 Annual Meeting, Los Angeles, Nov 2000.
39. P. Dachavijit and G.G. Chase, "Yield Stress Fluid Flow Through a Packed Bed: A Modified Ergun Equation," AICHE 2000 Annual Meeting, Los Angeles, Nov 2000.
40. "NSF Combined Research Curriculum Development on Multiphase Transport Phenomena", M. Amey, (MSU), A. Benard (MSU), G. Chase (UA), K. Jayaraman (MSU), R. Mohan (UT), C. Petty (speaker, MSU), S. Parks (MSU), T. Radcliff (UA), S. Shao (MSU), S. Shirazi (UT), O. Shoham (UT), K. Wisecarver (UT), M. Zhuang (MSU), *2000 North Central American Society for Engineering Education Meeting*, Kellogg Center, Michigan State University, March 31, 2000.
41. E. A. Stephan and G.G. Chase, "Effects of pH, Salt Concentration & Injected Particle Concentration on Zeta Potential and Core-flood Experiments," Produced Water Seminar, Nassau Bay, Texas, January 2000.
42. W. Wang and G.G. Chase, "Zeta Potential as an Indicator of Fines Retention," AICHE Annual Meeting, Dallas, November 1999
43. E. A. Stephan and G.G. Chase, "Prediction of Permeability Loss – Experimental Results," Produced Water Seminar, Nassau Bay, Texas, January 1999.
44. G.G. Chase, B. Beniwal, and C. Venkataraman, "Measurement of Fiber Orientation in Filter Media," AICHE Annual Meeting, Miami, November 1998.
45. G.G. Chase, "Solids Education for Chemical Engineers," AICHE Annual Meeting, Las Angeles, November 1997.
46. G.G. Chase and K. Jacob, "An Undergraduate Course in Solids Processing: A Combined Academic – Industrial Approach," ASEE Workshop, Snowbird Utah, August 1997.
47. E.A. Stephan and G.G. Chase, "A Volume-Average Scale Model for Fines Migration in Sandstone," Produced Water Seminar, Clear Lake, Texas, January 1997.
48. E.A. Stephan and G.G. Chase, "A Volume-Averaged Scale Model for Fines Migration in Sandstone," presented at the AICHE annual Meeting, Chicago, IL, November 1996.
49. G.G. Chase, "Thermodynamics of Solid/Liquid Separations," AICHe Annual Meeting, St. Louis, Nov. 1994.
50. G.G. Chase, J. Arconti, and J. Kanel, "The Effects of Filter Cakes on Filter Medium Resistance," AICHe Annual Meeting, St. Louis, Nov. 1993.
51. J. Arconti and G.G. Chase, "Determining Energy Usage and Quantifying the Medium Resistance in Filter Cakes," presented to the Eastman Chemical Company, Kingsport, TN, May 1993.
52. G.G. Chase, "Filtration Processes and Pump Sizing," Annual meeting of the American Institute of Chemical Engineers, Miami, November 1992.
53. G.G. Chase and J. Arconti, "Stress-Strain Relations of Compressible Porous Materials," Summer meeting of the American Institute of Chemical Engineers, Minneapolis, August 1992.
54. I. Tosun, U. Yetis, M.S. Willis, G.G. Chase, " Specific Cake Resistance: Myth or Reality," Special Conference, Wastewater Sludge Dewatering, Aalborg, Denmark, July 1992.

55. G.G. Chase, "Fluid/Particle Separations in the USA: Closing the Education Gap in Fluid-Particle Operations," Special education meeting of the American Filtration Society, Gainesville, Florida, January, 1992.
56. M.S. Willis and G.G. Chase, "A Continuum Analysis of Multiphase Material Systems: The Education Challenge," Special education meeting of the American Filtration Society, Gainesville, Florida, January, 1992.
57. M.S. Willis and G.G. Chase, "A General Strategy for Multiphase Processes," Summer meeting of the American Institute of Chemical Engineers, Pittsburgh, Pa, August 1991.
58. G.G. Chase and M.S. Willis, "Continuum Analysis of Non-Linear Cake Filtration," Annual Meeting of the American Institute of Chemical Engineers, Chicago, IL, November 1990.

## REPORTS

1. G.G. Chase, R. Boggavarapu, and S. Tonangi, "Acetone Extraction of 2,4 DNT from Contaminated Sand and Clay Soils: Evaluation of extraction, recovery of acetone by vapor flashing, and evaluations of DNT destruction in aqueous acetone solutions by sandbed and sonochemical reactors," SFIM-AEC-ET-96164, US Army Environmental Center, March 1997.
2. G.G. Chase, "Contaminant Migration Through a Phosphogypsum Stack: One Dimensional Computer Model of Water Saturation and Contaminant Concentrations; Genetic Algorithm Fitting of Parameters," Florida Institute of Phosphate Research, June 1996.
3. R. Boggavarapu & G.G. Chase, "A Study of Freezing and Vacuum Flashing to Recover Acetone from Acetone-Water-Energetic Mixtures," SFIM-AEC-ETD-CR-95025, US Army Environmental Center, February 1995.
4. G.G. Chase, "Modeling of Contaminant Migration Through a Phosphogypsum Stack," US Bureau of Mines, January 1995.
5. G.G. Chase and S.K. Kodavanti, "Thickening of Clay Slurries by Periodic Pressure Flow Through a Porous Polypropylene Tube," SFIM-AEC-TS-CR-93124, US Army Environmental Center and US Army Research Office (Battelle), October 1993.
6. G.G. Chase, "A Survey of Depots and Ammunition Plants on the Use of Hot Gas Decontamination," ENAEC-TS-CR-93103, US Army Environmental Center and US Army Research Office (Battelle), August 1993.
7. G.G. Chase, "An Evaluation of the Pump-and Treat Remediation of the South Balloon Site at Sharpe Army Depot (SHAD)," DAALO3-91-C-0034, US Army Toxic and Hazardous Materials Agency and US Army Research Office (Battelle), July 1992.