

Ruben G. Carbonell

Refereed Journal Publications

- 2000 L.A. Chen, G.A. Serad and R.G. Carbonell, *Recovery of Proteins and Other Biological Compounds From Food Processing Wastewaters Using Fibrous Materials and Polyelectrolytes*, *Water Research*, **34**, 510-518. **(3 citations)**
- 2000 G.W. Roberts, R.G. Carbonell and A.E. Sáez, *Gas-lift Reactors for Rapid Reactions with Appreciable Gas Consumption*, *Chemical Engineering and Technology*, **23**, 80-87.
- 2000 D.B. Kaufman, T. Hayes, J. Buettner, G.A. Baumbach and R.G. Carbonell, *Chromatographic Resolution of Tryptophan Enantiomers with L-Leu-L-Leu-Leu Peptide. Effects of Mobile Phase Composition and Chromatographic Support*, *J. of Chromatography A*, **874**, 21-26. **(2 citations)**
- 2000 Anup K. Singh, Joseph S. Schoeniger, and Ruben G. Carbonell, *Liposomes as Signal-Enhancing Agnes in Immunodiagnostic Applications*, in *Biosensors and Their Applications*, Yang and Ngo, Eds, Kluwer Academic/Plenum Publishers, New York, 1999.
- 2000 P.D. Bastek, J.M. Land, G.A. Baumbach, D.H. Hammond and R.G. Carbonell, *Discovery of Alpha-1 Proteinase Inhibitor Binding Peptides from the Screening of a Solid Phase Combinatorial Peptide Library*, *Separation Science and Technology*, **35** (11), 1681-1706. **(3 citations)**
- 2000 J.A. Kabin, S.T. Withers, C.S. Grant, R.G. Carbonell and A.E. Sáez, *Removal of Organic Films from Rotating Disks Using Emulsion Cleaners*, *J. of Colloid and Interface Science*, **228**, 344-358. **(2 citations)**
- 2000 R.G. Carbonell, *Multiphase Flow Models in Packed Beds*, *Oil and Gas Science and Technology*, *Revue de l'Institut Français du Pétrole*, **55**, 417-425. **(7 citations)**
- 2000 D.K. Taylor, R.G. Carbonell and J.M. DeSimone, *Opportunities for Pollution Prevention and Energy Efficiency Enabled by the Carbon Dioxide Technology Platform*, *Annual Review of Energy and the Environment*, **25**, 115-146.
- 2000 P.V. Gurgel, R.G. Carbonell and H.E. Swaisgood, *Fractionation of Whey Proteins with a Hexapeptide Ligand Affinity Resin*, *Bioseparation*, **9**, 385-392. **(3 citations)**
- 2001 J.D. Martinache, J.R. Royer, S. Siripurapu, F.E. Hénon, J. Genzer, S. Khan and R.G. Carbonell, *Processing of Polyamide 11 with Supercritical Carbon Dioxide*, *Industrial and Engineering Chemistry Research*, **40**, 5570-5577. **(6 citations)**
- 2001 P.V. Gurgel, R.G. Carbonell and H.E. Swaisgood, *Identification of Peptide Ligands Generated by Combinatorial Peptide Chemistry that Bind α -Lactalbumin*, *Separation Science and Technology*, **36**, 2411-2431. **(3 citations)**
- 2001 P.V. Gurgel, R.G. Carbonell and H.E. Swaisgood, *Studies of the Binding of α -Lactalbumin to Immobilized Peptide Ligands*, *J. of Agricultural and Food Chemistry*, **49**, 5765-5770. **(3 citations)**
- 2001 Y. Chernyak, F. Henon, R.B. Harris, R.D. Gould, R.K. Franklin, J.R. Edwards, J.M. DeSimone, and R.G. Carbonell, *Formation of Perfluoropolyether Coatings by the Rapid Expansion of Supercritical Solutions (RESS) Process. Part 1: Experimental Results*, *Industrial and Engineering Chemistry Research*, **40**, 6118-6126. **(9 citations)**

- 2001 R.K. Franklin, J.R. Edwards, Y. Chernyak, R.D. Gould, F. Henon and R.G. Carbonell, *Formation of Perfluoropolyether Coatings by the Rapid Expansion of Supercritical Solutions (RESS) Process. Part 2: Numerical Modeling*, Industrial and Engineering Chemistry Research, **40**, 6127-6139. **(9 citations)**
- 2002 D.B. Kaufman, M.E. Hentsch, G.A. Baumbach, J.A. Buettner, C.A. Dadd, P.Y. Huang, D.J. Hammond and R.G. Carbonell, *Affinity Purification of Fibrinogen Using a Ligand from a Peptide Library*, Biotechnology and Bioengineering, **77**, 278-289. **(10 citations)**
- 2002 A. Lakota, J. Levec and R.G. Carbonell, *Hydrodynamics of Trickling Flow in Packed Beds: Relative Permeability Concept*, AIChE Journal, **48**, 731-738. **(1 citation)**
- 2002 F.E. Henon, R.G. Carbonell and J. DeSimone, *Effect of Polymer Coatings from CO₂ on Water-Vapor Transport in Porous Media*, AIChE Journal, **48**, 941-952. **(3 citations)**
- 2002 K. Efimenko, B. Novick, R.G. Carbonell, J. M. DeSimone and J. Genzer, *Formation of Self-Assembled Monolayers of Fluorinated and Hydrocarbon Chlorosilane Precursors on Silica Surfaces from Liquid Carbon Dioxide*, Langmuir, **18**, 6170-6179. **(2 citations)**
- 2003 D. Xu, R.G. Carbonell, D.J. Kiserow and G.W. Roberts, *Kinetic and Transport Processes in the Heterogeneous Catalytic Hydrogenation of Polystyrene*, Industrial and Engineering Chemistry Research, **42**, 3509-3515. **(3 citations)**
- 2003 R.G. Carbonell, *The CO₂ Technology Platform*, in Challenges for the Chemical Sciences in the 21st Century: The Environment, National Research Council, The National Academies Press, Washington, D.C., 80-84.
- 2003 N. Zaki, P. K. Kilpatrick and R.G. Carbonell, *A Novel Process for Demulsification of Water-in-Crude-Oil Emulsions by Dense Carbon Dioxide*, Industrial and Engineering Chemistry Research, **42**, 6661-6672. **(0 citations)**
- 2003 P.S. Shah, B.J. Novick, H.S. Hwang, K.T. Lim, R.G. Carbonell, K.P. Johnston and B.A. Korgel, *Kinetics of Nonequilibrium Nanocrystal Monolayer Formation: Deposition from Liquid Carbon Dioxide*, Nanoletters, **3**, 1671-1675. **(12 citations)**
- 2003 M.M. Elbaccouch, V.I. Bondar, R.G. Carbonell and C. S. Grant, *Phase Behavior of the Binary Systems CO₂+Nonadecane and CO₂ + Soysol and the Ternary System CO₂ + Soysolve + Quarternary Ammonium Chloride Surfactant*, J. Chem. Engr. Data, **48**, 1401-1406. **(1 citation)**
- 2004 B. Novick, J. DeSimone and R.G. Carbonell, *Deposition of Thin Polymeric Films from Liquid Carbon Dioxide Using a High-pressure Free-Meniscus Coating Process*, Industrial and Engineering Chemistry Research, **43**, 515-52. **(3 citations)**
- 2004 E. Hoggan, K. Wang, D. Flowers, J. DeSimone and R.G. Carbonell, *Spin Coating of Photoresists Using Liquid Carbon Dioxide*, IEC Research, **43**, 2113-2122. **(2 citations)**
- 2004 G. Wang, J. De, D.C. Roe, J. Schoeniger, R.G. Carbonell, *A Hexamer Peptide Ligand that Binds Selectively to Staphylococcal Enterotoxin B: Isolation from a Solid Phase Combinatorial Library*, J. Peptide Research, **64**(2,) 51-64. **(3 citations)**

- 2004 E. Hoggan, K. Wang, J. DeSimone, and R.G. Carbonell, "Dry" Lithography Using Liquid and Supercritical CO₂ Based Chemistries and Processes, IEEE Transactions on Semiconductor Manufacturing, **17** (4), 510-517. **(0 citations)**
- 2004 Jones, C.A., Geissler, A., DeYoung, J.P., McClain, J.B., Carbonell R.G. and DeSimone, J.M., Applications of "Dry" Processing in the Microelectronics Industry Using Carbon Dioxide, Critical Reviews in Solid State and Materials Sciences, **29**, 970-109.
- 2005 S. Cotugno, E. DiMaio, G. Mensitieri, S. Iannace, G.W. Roberts, R.G. Carbonell and H.B. Hopfenberg, Characterization of Microcellular Biodegradable Polymeric Foams Produced from Supercritical Carbon Dioxide Solutions, I&EC Research **44**(6), 1795-1803. **(0 citations)**
- 2005 G. Wang and R.G. Carbonell, Characterization of a Peptide Affinity Supports that Binds Selectively to Staphylococcal Enterotoxin B, J. Chromatography A, **1078**, 98-112. **(0 citations)**
- 2005 D. Xu, R.G. Carbonell, D.J. Kiserow and G.W. Roberts, Hydrogenation of Polystyrene in CO₂-Expanded Solvents: Catalyst Poisoning, I&EC Research, **44** (16), 6164-6170. **(0 citations)**
- 2005 Visintin, P., Carbonell, R., Schauer, C.K. and J.M. DeSimone, Chemical Functionalization of Silica and Alumina Particles for Dispersion in Carbon Dioxide, Langmuir, **21**, 4816-4823. **(1 citation)**
- 2005 Xu, D., R.G. Carbonell, G.W. Roberts and D.J. Kiserow, Phase Equilibrium for the Hydrogenation of Polystyrene in CO₂-Swollen Solvents, J. Supercrit. Fluids, **34**, 1-9. **(0 citations)**

Symposium Proceedings and Book Chapters

- 2001 A.M. Moraes, P.T.V. Rosa, M.H.A. Santana and R.G. Carbonell, *Microparticulate Agents for Neutron Capture Therapy*, in Microspheres, Microcapsules & Liposomes, Volume 3: Radiolabeled and Magnetic Particulates in Medicine and Biology, Citus Reference Series, R. Arshady, Ed., Citus Books, London
- 2001 E.N. Hoggan, B.J. Novick, R.G. Carbonell and J. DeSimone, *Novel Microelectronic Coatings Using Liquid CO₂*, Semiconductor Fabtech, 16th Edition, 169-173.
- 2001 Y. Chernyak, F. Henon, E. Hoggan, B. Novick, J.M. DeSimone and R.G. Carbonell, *Coatings from Liquid and Supercritical Carbon Dioxide*, Green Chemistry and Supercritical Carbon Dioxide, J.M. DeSimone and W. Tumas, Editors, Oxford University Press, New York, pp.193-214.
- 2005 G. Wang, J. Salm, P.V. Gurgel and R.G. Carbonell, *Small Peptide Ligands for Affinity Separations of Biological Molecules*, in Chemical Engineering: Trends and Developments, M.A. Galan and E. Martin del Valle, Eds., J. Wiley & sons, Ltd., London, Chapter 3, pp. 63-83.