

**LIST OF INSTITUTE FOR POLYMER RESEARCH PREPRINTS
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- 08/001 **Arborescent polystyrene-graft-poly(2-vinylpyridine) copolymers as unimolecular micelles: solubilization studies**
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- 08/002 **Estimating reactivity ratios from triad fraction data**
E. Hauch, X. Zhou, T.A. Duever and A. Penlidis
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- 08/003 **Self-assembly of arborescent polystyrene-graft-poly(ethylene oxide) copolymers at the air-water interface**
G.N. Njikang, L. Cao, M. Gauthier
Macromol. Chem. And Phys., Acc., 02/08
- 08/004 **Improvements in the hydrogenation of nitrile rubber using Wilkinson's catalyst**
N.T. McManus, G.L. Rempel
Rubber Chem and Tech., Acc., 03/08
- 08/005 **Hydrosilylation of impact polypropylene co-polymer in a twin-screw extruder**
M.P. Bulsari, C. Tzoganakis, A. Penlidis
J. Elast. Plastics, Acc., 03/08
- 08/006 **Effect of the addition of inert or TEMPO-capped prepolymer on polymerization rate and molecular weight development in the nitroxide-mediated radical polymerization of styrene**
M. Roa-Luna, A. Nabifar, N.T. McManus, E. Vivaldo-Lima, L.M.F. Lona, A. Penlidis
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- 08/007 **Simulation of reversible addition-fragmentation transfer (RAFT) Dispersion polymerization in supercritical carbon dioxide**
G. Jaramillo-Soto, M. Luz Castellanos-Cardenas, P.R. Garcia-Moran, E. Vivaldo Lima, G. Luna-Barcenas, A. Penlidis
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- 08/008 **A comparison of modeling approaches for dispersion homopolymerization of methyl methacrylate (MMA) and styrene in supercritical carbon dioxide**
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- 08/009 **A tensile strain hardening test indicator of environmental stress cracking resistance**
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- 08/010 **Effect of side-chain length on the side-chain dynamics of a α -helical poly(L-glutamic acid) as probed by a fluorescence Blob model**
M.W. Ingratta and J. Duhamel
J. Phys. Chem B, Acc., 04/08
- 08/011 **A case for using randomly labeled polymers to study long range polymer chain dynamics by fluorescence**
M.W. Ingratta, J. Hollinger, J. Duhamel
J. Am. Chem. Soc., Acc., 05/08
- 08/012 **Large-scale synthesis of arborescent polystyrenes**
A. Munam and M. Gauthier
J. Poly. Sci., A: Poly. Chem., Acc., 05/08
- 08/013 **A replicated investigation of nitroxide-mediated radical polymerization of styrene over a range of reaction conditions**
A. Nabifar, N.T. McManus, E. Vivaldo-Lima, L.M.F. Lona, A. Penlidis
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- 08/014 **Asymmetric caging in soft colloidal mixtures**
C. Mayer, E. Zaccarelli, E. Stiakakis, C.N. Likos, F. Sciortino, A. Munam, M. Gauthier, N. Hadjichristidis, H. Iatrou, P. Tartaglia, H. Lowen, D. Vlassopoulos
Nature Materials, Acc., 07/08
- 08/015 **Arborescent amphiphilic copolymers as templates for the preparation of gold nanoparticles**
J. Dockendorff, M. Gauthier, A. Mourran and M. Moller
Macromol. (communication to the editor), Acc., 08/08
- 08/016 **Temperature-responsive supramolecular assembly and morphology of arborescent copolymer micelles with a solvophilic core—solvophobic shell structure**
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- 08/017 **Pressure- and temperature-induced association of arborescent polystyrene- *graft*-poly(ethylene oxide) copolymers at the air-water interface**
G.N. Njikang, L. Cao, M. Gauthier
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- 08/018 **Modeling of ethylene polymerization with difunctional initiators in tubular reactors**
P.K.F. Khazraei, R. Dhib
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- 08/019 **Sustained release properties of arborescent polystyrene-graft-poly (2-vinylpyridine) copolymers**
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- 08/020 **Thermal polymerization of styrene in the presence of TEMPO**
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Chem Eng. Sci, Acc., 10/08
- 08/021 **An experimental study on the free-radical copolymerization kinetics with crosslinking of styrene and divinylbenzene in supercritical carbon dioxide**
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- 08/022 **Modified frontal polymerization of poly(methyl methacrylate)**
A.G. Villegas, M.A. Ocampo, E. Saldivar-Guerra, B. Garcia-Gaitan, E. Vivaldo-Lima, G. Luna-Barcenas
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- 08/023 **Modeling of polymerization kinetics and molecular weight development in the microwave-activated nitroxide-mediated radical polymerization of styrene**
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- 07/001 **Nitroxide-mediated controlled degradation of polypropylene**
A. Psarreas, N. McManus, C. Tzoganakis, A. Penlidis
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- 07/003 **Viscoelastic Properties of Arborescent Polystyrene-graft-polyisoprene copolymers**
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- 07/004 **Recent advances in the study of multifunctional initiators in free radical polymerizations**
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- 07/005 **Synthesis of low density poly(ethylene) using nickel iminophosphonamide complexes**
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- 07/006 **Comparative study of propylene polymerization using $\text{Me}_2\text{Si}(\text{RInd})_2\text{ZrCl}_2/\text{SiO}_2\text{-SMAO}/\text{AlR}_3$ and $\text{Me}_2\text{Si}(\text{RInd})_2\text{ZrCl}_2/\text{MAO}$ (R=Me, H)**
F.C. Franceschini, T.T. da R. Tavares, J.H.Z. dos Santos, J.B.P. Soares, M.L. Ferreira
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- 07/007 **Atom-transfer radical polymerization of styrene with bifunctional and monofunctional initiators: experimental and mathematical modelling results**
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- 07/008 **Prediction of chain length distribution of polystyrene made in batch reactors with bifunctional free-radical initiators using dynamic Monte Carlo simulation**
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- 07/009 **Effect of a poly(dimethylsiloxane) modified polyolefin additive on the processing and surface properties of LLDPE**
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- 07/011 **Synthesis of arborescent copolymers by a one-pot method**
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- 07/012 **Functionalization of polypropylene with sulfonyl azide through reactive processing**
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- 07/013 **Effect of temperature and pressure on surface tension of polystyrene in supercritical carbon dioxide**
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- 07/014 **Effect of molecular weight on the surface tension of polystyrene melt in supercritical nitrogen**
H. Park, C.B. Park, C. Tzoganakis, P. Chen
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- 07/015 **Arborescent polymers and other dendrigraft polymers: A journey into structural diversity**
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- 07/016 **An overview of important microstructural distributions for polyolefin analysis**
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- 07/017 **A mathematical model for the kinetics of crystallization in crystal**
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- 07/018 **Characterization of ethylene-1-hexene copolymers made with supported metallocene catalysts: influence of support type**
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- 07/019 **Correlating pyrene excimer formation with polymer chain dynamics in solution. Possibilities and limitations.**
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- 07/021 **Nitroxide-mediated controlled degradation of polypropylene**
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- 07/022 **A practical approach to modeling time-dependent nonlinear creep behavior of polyethylene for structural applications**
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- 07/023 **Copolymer composition control policies: characteristics and applications**
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J. Macromol. Sci., Pure and Appl. Chem, Acc., 09/07
- 07/024 **Toward a living radical polymerization of styrene by using dithiolactones as a new type of mediating agent**
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- 07/025 **Steady state simulation of ethylene polymerization using multiple-site coordination catalysts**
F.Perez Valencia and J.B.P. Soares
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- 07/026 **Nanofilled silicone dielectrics prepared with surfactant for outdoor insulation applications**
I. Ramirez, E.A. Cherney, S. Jayaram and M. Gauthier
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- 07/027 **Simulation of polymerization and long chain branch formation in a semi-batch reactor using two single-site catalysts**
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- 07/028 **Conformation of arborescent polymers in solution by small-angle neutron scattering: segment density and core-shell morphology**
S.I. Yun, K.-C. Lai, R.M. Briber, S.J. Teertstra, M. Gauthier, B.J. Bauer
Macromolecules, Acc., 12/07
- 07/029 **Arborescent polystyrene-graft-poly(tert-butyl methacrylate) copolymers**
R.A. Kee and M. Gauthier
J. Polym. Sci., Part A: Polym. Chem., Acc., 12/07
- 07/030 **Chain length distributions of polyolefins made in stopped-flow reactors for non-instantaneous site activation**
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- 07/031 **Structure and optical properties of natural biopolymers chitin and chitosan**
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E. Vivaldo-Lima, J.F. Louvier-Hernandez, Y.V. Vorobiev and
J. Gonzalez-Hernandez
Physica Status Solidi (a)-Applications and Materials Science, Acc., 12/07

2006

- 06/001 **Mathematical modelling of atom-transfer radical polymerization using bifunctional initiators**
M. Al-Harhi, J.B.P. Soares, L.C. Simon
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- 06/002 **Modelling of atom transfer radical polymerization with bifunctional initiators: diffusion effects and case studies**
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- 06/003 **One-pot synthesis of arborescent polystyrenes**
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- 06/004 **Dilute-solution structure of charged arborescent graft polymer**
S.I. Yun, R.M. Briber, R.A. Kee, M. Gauthier
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- 06/005 **Bulk copolymerization of styrene and methyl methacrylate at elevated temperatures**
S. Shankar. R. Khesareh, N. McManus and A. Penlidis
J. Macromol. Sci., Pure and Appl. Chem., Acc., 01/06
- 06/006 **Controlled free-radical copolymerization kinetics of styrene and divinylbenzene by bimolecular NMRP using TEMPO and dibenzoyl peroxide**
E. Tuinman, N.T. McManus, M. Roa-Luna, E. Vivlado-Lima, L.M.F. Lona, A. Penlidis
J. Macromol. Sci., Pure and Appl. Chem., Acc., 02/06
- 06/007 **Experimental study of a tetrafunctional peroxide initiator: bulk free radical polymerization of butyl acrylate and vinyl acetate**
M.J. Scolah, R. Cosentino, R. Dhib, A. Penlidis
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- 06/008 **Modelling of free radical polymerization of styrene and methyl methacrylate by a tetrafunctional initiator**
M.J. Scolah, R. Dhib, A. Penlidis
Chem. Eng. Sci., Acc., 03/06
- 06/009 **Layer-by-layer self-assembled polyelectrolyte membranes for solvent dehydration by pervaporation**
Z. Zhu, X. Feng and A. Penlidis
Mat. Sci. Eng., Acc., 12/05

- 06/010 **Of the uses of the pyrene label for fluorescence studies of polymeric interfaces**
J. Duhamel
Ed. by P. Chen, Woodhead Publishing Co., 2005, pg. 214-248
- 06/011 **Study of the semidilute solutions of poly (*N,N*-dimethylacrylamide) by fluorescence and its implications to the kinetics of coil-to-globule transitions**
K. Irondi, M. Zhang, J. Duhamel
J. Phys. Chem. B 110 pg. 2628-2637, 2006
- 06/012 **NMR analysis of butyl acrylate-methyl methacrylate-alpha methyl styrene terpolymers**
N.T. McManus and A. Penlidis
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- 06/013 **Studies of copolymers of 3-methacryloyloxyethyl-4'-methylphenyl ketone and methyl methacrylate**
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- 06/014 **A comparison of reaction mechanisms for reversible addition-fragmentation chain transfer polymerization using modeling tools**
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- 06/015 **Dynamic Monte Carlo Simulation of Atom-Transfer Radical Polymerization**
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- 06/017 **Mathematical modeling of crystallization analysis fractionation (Crystaf) of polyethylene**
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- 06/018 **Chain length distributions of polyolefins made with coordination catalysts at very short polymerization times—analytical solution and Monte Carlo simulation**
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- 06/020 **Polymer chain dynamics in solution probed with a fluorescence blob model**
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- 06/021 **Micromechanical Approach to Modeling Damage in Crystalline Polyethylene**
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- 06/022 **Characterization by dilute solution and rheological methods of polystyrene and poly(methyl methacrylate) produced with a tetrafunctional peroxide initiator**
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- 06/024 **Another perspective on the nitroxide mediated radical polymerization (NMRP) of styrene using 2,2,6,6-tetramethyl-1-piperidinyloxy (TEMPO) and dibenzoyl peroxide (BPO)**
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- 06/025 **Terpolymerization with depropagation: modeling the copolymer composition of the methyl methacrylate/alpha-methylstyrene/butyl acrylate system**
M.J. Leamen, N.T. McManus, A. Penlidis
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- 06/026 **Assessing the importance of diffusion-controlled effects on polymerization rate and molecular weight development in nitroxide-mediated radical polymerization of styrene**
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- 06/027 **Dynamic Monte Carlo simulation of ATRP with bifunctional initiators**
M. Al-Harhi, J.B.P. Soares and L.C. Simon
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- 06/028 **Coordination Polymerization**
J.B.P. Soares, T. McKenna, C.P. Cheng
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- 06/029 **A kinetic study of metallocene-catalyzed ethylene polymerization using different aluminoxane cocatalysts**
D.M. Sarzotti, D.J. Marshman, W.E. Ripmeester, J.B.P. Soares
J. Polym. Sci, Part A, Polym. Chem., Published, 12/06
- 06/030 **Nitroxide-mediated radical polymerization of styrene using mono- and di-functional initiators**
R.S. Dias, M.C. Goncalves, L.M.F. Lona, E.Vivaldo-Lima, N.T. McManus, A. Penlidis
Chem. Eng. Sci, Acc., 12/06
- 06/031 **Simulation of styrene polymerization by monomolecular and bimolecular nitroxide-mediated radical processes over a range of reaction conditions**
J.B. Ximenes, P.V.R. Mesa, L.M.F. Lona, E. Vivaldo-Lima, N.T. McManus, A. Penlidis
Macromol. Theory and Simul., Acc., 12/06

2005

- 05/001 **Characterization of the aggregates made by short poly(ethylene oxide) chains labelled at one end with pyrene**
H. Siu, T.J.V. Prazeres, J. Duhamel
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- 05/002 **Crystallization Analysis Fractionation (Crystaf)**
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- 05/003 **Microstructural characterization of molecular weight fractions of ethylene/1,7-octadiene copolymers made with a constrained geometry catalyst**
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- 05/006 **Synthesis of arborescent isoprene homopolymers**
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- 05/007 **A practical approach to simulate polymerizations with minimal information**
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- 05/008 **Use of a novel tetrafunctional initiator in the free radical homo- and copolymerization of styrene, methyl methacrylate and α -methyl styrene**
M.J. Scolah, R. Dhib and A. Penlidis
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- 05/009 **Binary copolymerization with full depropagation: a study of methyl methacrylate/ α -methyl styrene copolymerization**
M.J. Leamen, N.T. McManus, A. Penlidis
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- 05/010 **High temperature bulk copolymerization of methyl methacrylate and acrylonitrile: I. Reactivity ratio estimation**
R. Khesareh, N.T. McManus and A. Penlidis
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- 05/011 **Interfacial properties of amphiphilic dendritic polymers**
G.N. Njikang and M. Gauthier
Molecular interfacial phenomena of polymers and biopolymers. Ed. Pu Chen, publi. Woodhead Publishing (UK), Acc., 05/05
- 05/012 **Branching level detection in polymers**
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Encyclopedia of Chemical Processing (ECHP), S. Lee (Ed.), Marcel Dekker, NY, Acc., 05/05
- 05/013 **The importance of considering non-fluorescent pyrene aggregates for the study of pyrene-labeled associative thickeners by fluorescence**
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- 05/014 **Correlations between the viscoelastic behaviour of pyrene-labeled associative polymers and the associations of their fluorescent hydrophobes**
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- 05/015 **Self-assembled nanostructured polyelectrolyte composite membranes for pervaporation**
Z. Zhu, X. Feng and A. Penlidis
Mtls Sci. and Eng., Acc., 07/05
- 05/016 **High temperature bulk copolymerization of methyl methacrylate and acrylonitrile: II. Full conversion range experiments**
R. Khesareh, N.T. McManus and A. Penlidis
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- 05/017 **High temperature bulk copolymerization of methyl methacrylate and acrylonitrile: III. Thermal polymerization**
R. Khesareh, N.T. McManus and A. Penlidis
Polym. Plast. Techn. Eng., Acc., 10/05
- 05/018 **Grafting of ethylene-ethyl acrylate-maleic anhydride terpolymer with amino-terminated polydimethylsiloxane during reactive processing**
N.T. McManus, S.-H. Zhu, C. Tzoganakis, and A. Penlidis
J. Appl. Polym. Sci., Acc., 10/05

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**Associations between a pyrene-labeled hydrophobically modified
alkali swellable emulsion copolymer and sodium dodecyl sulfate
probed by fluorescence, surface tension and rheology**

H. Siu and J. Duhamel

Macromolecules, Acc., 11/05

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- 04/001 **Characterization by fluorescence of the distribution of maleic anhydride grafted onto ethylene-propylene copolymers**
M. Zhang, J. Duhamel, M van Duin, P. Meessen
Macromolecules, Acc., 01/04
- 04/002 **Dendrigraft polymers: macromolecular engineering on a mesoscopic scale**
S.J. Teertstra and M. Gauthier
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- 04/003 **Blob model analysis of the pH-induced fluorescence quenching of two anthracene-labeled poly(2-vinylpyridine)s**
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Macromolecules, Acc., 01/04
- 04/004 **Homopolymer of 4-propanoylphenyl methacrylate and its copolymers with glycidyl methacrylate: Synthesis, characterization, reactivity ratios and application as adhesives**
G.G. Godwin, C.S. Jone Selvamalar, A. Penlidis and S. Nanjundan
Reactive and Functional Polymers, Acc., 01/04
- 04/005 **Homopolymer and Copolymers of 4-Benzyloxycarbonylphenyl Acrylate with Glycidyl Methacrylate: Synthesis, Characterization, Reactivity Ratios and Application as Adhesive for Leather**
C.S. Jone Selvamalar, P.S. Vijayanand, A. Penlidis, S. Nanjundan
J. Appl. Polym. Sci., Acc., 02/04
- 04/006 **Determination of monomer reactivity ratios in styrene/2-ethylhexylacrylate copolymer**
A. Kavousian, F. Ziaee, M.H. Nekoomanesh, M.J. Leamen, A. Penlidis
J. Appl. Polym. Sci., Acc., 02/04
- 04/007 **A study on the cocrystallization of blends of ethylene/1-olefin copolymers during crystallization analysis fractionation (Crystaf)**
S. Anantawaraskul, J.B.P. Soares, P.M. Wood-Adams
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- 04/008 **Inverse modelling applications in emulsion polymerization of vinyl acetate**
F.A.N. Fernandes, L.M.F. Lona, A. Penlidis
Chem. Eng. Sci., Acc., 02/04
- 04/009 **Copolymers of 4-(3,4-dimethoxy cinnamoyl)phenyl acrylate and MMA: Synthesis, characterization, photocrosslinking properties and monomer reactivity ratios**
P. Selvam, K. Victor Babu, A. Penlidis, S. Nanjundan
J. Macromol. Sci.—Pure Appl. Chem., Acc., 03/04

- 04/010 **High temperature copolymerization of styrene/ethyl acrylate: reactivity ratio estimation in bulk and solution**
N. Sahloul and A. Penlidis
Adv. In Polym. Techn., Acc., 03/04
- 04/011 **Fractionation**
J.B.P. Soares
Encyclopedia of Polymer Science and Technology
John Wiley and Sons, 2004
- 04/012 **The refractive index increment (dn/dc) using GPC for the alpha-methyl styrene/methyl methacrylate copolymer at 670 nm in tetrahydrofuran**
M.J. Leamen, N.T. McManus and A. Penlidis
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