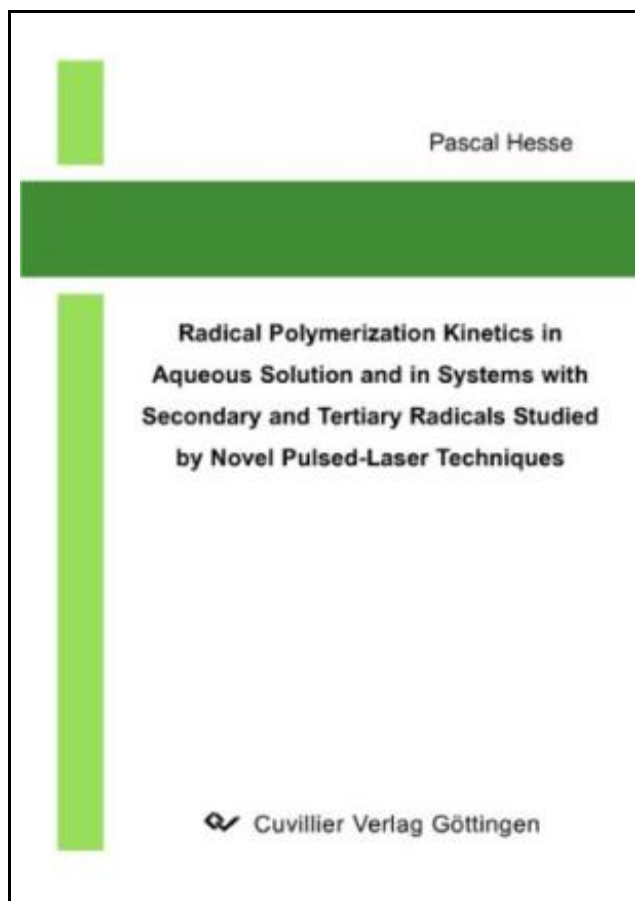


Radical Polymerization Kinetics in Aqueous Solution and in Systems with Secondary and Tertiary Radicals Studied by Novel Pulsed- Laser Techniques



Filesize: 4.09 MB

Reviews

This published publication is fantastic. it had been writtern very perfectly and useful. Once you begin to read the book, it is extremely difficult to leave it before concluding.

(Junius Herman)

RADICAL POLYMERIZATION KINETICS IN AQUEOUS SOLUTION AND IN SYSTEMS WITH SECONDARY AND TERTIARY RADICALS STUDIED BY NOVEL PULSED- LASER TECHNIQUES



Cuvillier Verlag Aug 2008, 2008. Taschenbuch. Book Condition: Neu. 208x146x20 mm. Neuware - Abstract Rate coefficients of propagation, k_p , of termination, k_t , and of intramolecular transfer-to-polymer, k_{bb} , have been studied via pulsed-laser polymerization (PLP) methods for systems with strong intermolecular interactions, such as hydrogen bonds, and for polymerizations with two types of distinctly different radicals being present. The propagation kinetics of methacrylic acid (MAA) and N-vinyl pyrrolidone (NVP) in aqueous solution has been investigated by the PLP-SEC technique which combines PLP-initiation with subsequent analysis of the produced polymer by size-exclusion chromatography. The experimental conditions of monomer concentration, temperature, pressure and degree of monomer ionization have been varied in wide ranges. The dependence of k_p on monomer-to-polymer conversion has been determined from PLP-SEC experiments with pre-mixed polymer. The variation of k_p may be adequately explained by the interaction of solvent and monomer molecules with the transition state structure for propagation. The termination rate coefficients of MAA and NVP have been studied by the SP PLP NIR method in which the change in monomer concentration after single pulse (SP) initiation is monitored via ms time-resolved near infrared spectroscopy (NIR). The variations of k_t with conversion for different initial monomer concentrations reflect the diffusion-controlled character of the termination step with k_t being governed by segmental, translational, and reaction diffusion. In acrylate polymerization backbiting reactions may occur by which chain-end secondary propagating radicals (SPR) are transformed into tertiary midchain radicals (MCR) via 1,5-hydrogen shift. MCRs can react back to SPRs by monomer addition. The basic kinetic scheme has to be extended for additional reactions steps, as SPR and MCR species show widely different k_p and k_t , respectively. The impact of MCR formation on the applicability of the experimental techniques for k_p and k_t determination, i.e. PLP-SEC and SP-PLP-NIR, was investigated by PREDICI simulations. A...



Read Radical Polymerization Kinetics in Aqueous Solution and in Systems with Secondary and Tertiary Radicals Studied by Novel Pulsed- Laser Techniques Online



Download PDF Radical Polymerization Kinetics in Aqueous Solution and in Systems with Secondary and Tertiary Radicals Studied by Novel Pulsed- Laser Techniques

Other Books



Read Write Inc. Phonics: Get Writing! Red Ditty Books 1-5

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. Tim Archbold (illustrator). 210 x 157 mm. Language: N/A. Brand New Book. The Get Writing! Ditty Books contain handwriting, spelling and composition activities linked to...

[Read Book »](#)



Klara the Cow Who Knows How to Bow (Fun Rhyming Picture Book/Bedtime Story with Farm Animals about Friendships, Being Special and Loved. Ages 2-8) (Friendship Series Book 1)

Createspace, United States, 2015. Paperback. Book Condition: New. Apoorva Dingar (illustrator). Large Print. 214 x 149 mm. Language: English . Brand New Book ***** Print on Demand *****.Klara is a little different from the other...

[Read Book »](#)



Index to the Classified Subject Catalogue of the Buffalo Library; The Whole System Being Adopted from the Classification and Subject Index of Mr. Melvil Dewey, with Some Modifications .

Rarebooksclub.com, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.This historic book may have numerous typos and missing text. Purchasers can usually...

[Read Book »](#)



Growing Up: From Baby to Adult High Beginning Book with Online Access

Cambridge University Press, 2014. UNK. Book Condition: New. New Book. Shipped from US within 10 to 14 business days. Established seller since 2000.

[Read Book »](#)



Ninja Adventure Book: Ninja Book for Kids with Comic Illustration: Fart Book: Ninja Skateboard Farts (Perfect Ninja Books for Boys - Chapter Books for Kids Age 8 - 10 with Comic Pictures Audiobook with Book)

Createspace, United States, 2013. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.BONUS - Includes FREE Dog Farts Audio Book for Kids Inside! For a...

[Read Book »](#)