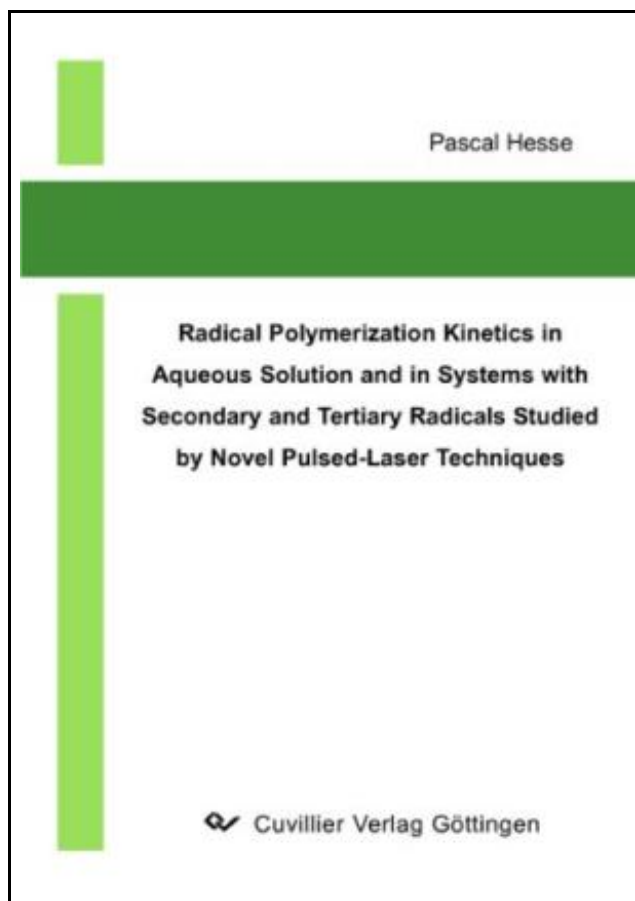


Radical Polymerization Kinetics in Aqueous Solution and in Systems with Secondary and Tertiary Radicals Studied by Novel Pulsed- Laser Techniques



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



Psychologisches Testverfahren

Reference Series Books LLC Nov 2011, 2011. Taschenbuch. Book Condition: Neu. 249x191x7 mm. This item is printed on demand - Print on Demand Neuware - Quelle: Wikipedia. Seiten: 100. Kapitel: Myers-Briggs-Typindikator, Keirsey Temperament Sorter, DISG,...

[Read Book »](#)



Programming in D

Ali Cehreli Dez 2015, 2015. Buch. Book Condition: Neu. 264x182x53 mm. This item is printed on demand - Print on Demand Neuware - The main aim of this book is to teach D to readers...

[Read Book »](#)



Zach Apologizes

Free Spirit Publishing Inc.,U.S. Hardback. Book Condition: new. BRAND NEW, Zach Apologizes, William Mulcahy, When Zach shoves his little brother to the floor, he knows he did something wrong. Even so, it's hard to apologize--especially...

[Read Book »](#)



The Java Tutorial (3rd Edition)

Pearson Education, 2001. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Praise for "The Java' Tutorial, Second Edition" includes: "This book...

[Read Book »](#)



The Friendly Stranger

Lion Hudson Plc. Paperback. Book Condition: new. BRAND NEW, The Friendly Stranger, Margaret Anne Williams, Steve Smallman, Children relate to stories and there is was never a better storyteller than Jesus. With bright colourful illustrations,...

[Read Book »](#)