

# Author Index

- Alegria A 24  
Alig I 162  
Alvarez F 20, 24  
Anastasiadis SH 88, 97  
Ansarifar MA 83  
Arbe A 24
- Bahar I 1, 16  
Baschnagel J 5  
Bastide J 105  
Benmansour Z 109  
Benmouna M 109  
Benoit H 109  
Berman R 43  
Binder K 5  
Binkert Th 156  
Börjesson L 43, 46  
Boué F 105  
Brereton MG 8  
Brown W 113  
Burgess A 28  
Buzier M 105
- Chu B 51, 142  
Colmenero J 20, 24
- Dai L 83  
Darinskii A 13  
Duval M 117
- Erman B 1, 16  
Ewen B 121, 130
- Farago B 121, 130  
Fetters LJ 130  
Fischer EW 1, 35, 58, 66, 109  
Fleischer G 55  
Floudas G 28, 124, 162  
Frick B 24  
Fytas G 20, 58, 72, 124, 135, 162
- Gallot Y 117  
Gerharz B 58  
Giebel L 124  
Gießler KH 101  
Gläser H 35
- Gotlib Yu 13  
Götzelmann A 101
- Haida H 117  
Heermann DW 5  
Hellmann EH 146  
Hellmann GP 146  
Helmstedt M 127  
Higgins JS 28  
Hoffmann A 61  
Huang JS 130
- Jacobsson P 46  
Janßen S 80  
Joosten JGH 149
- Karasz FE 153  
Koch T 61  
Kremer F 1, 39  
Kremer K 5
- Langley KH 153  
Lartigue C 105  
Li Y 51  
Lindner P 105  
Lingelser JP 117  
Lohfink M 31  
Lukyanov M 13  
Lyulin A 13
- Majkrzak CF 88, 97  
Maschke U 121  
Meeves M 156  
Meier G 35, 66  
Mendes E 105  
Menelle A 88, 97  
Momper B 66  
Mortensen K 69  
Motschmann H 83
- Neelov I 13  
Ngai KL 72, 75, 135  
Nilgens H 35
- Oeser R 105
- Patkowski A 35  
Paul W 5  
Pecora R 165
- Quellet Ch 156
- Rauch F 101  
Reiter G 93  
Rennie AR 146  
Richter D 121, 130  
Ricka J 156  
Rizos AK 72, 135  
Roland CM 75  
Roovers JEL 72  
Russell TP 88, 97
- Satija SK 88, 97  
Schlosser E 39, 158  
Schönhals A 39, 158  
Schuler M 61  
Schwahn D 80  
Sidebottom DL 43, 46  
Sillescu H 31  
Springer T 80  
Stamm M 83, 101  
Steffen W 35, 124  
Steiner U 93  
Stickel F 61  
Stieber F 162  
Stühn B 61
- Teraoka I 153  
Toprakcioglu C 83  
Torell LM 43, 46  
Tracy MA 165
- Vilgis TA 109  
Vogt S 58
- Wang CH 20, 138  
Wang Z 142  
Wittmann H-P 5
- Yu J 142
- Zielinski F 105

# Subject Index

- $\alpha$ -relaxation 39, 158  
 –, dynamics of the 24
- adsorption 83  
 anisotropic polarizability, dense systems 16  
 annealing effects 51  
 apparatus, surface-force 83  
 Arrhenius plot 158
- blends, polymer 8, 146  
 block copolymers 61, 69, 83, 97  
 bond fluctuation model 5  
 branching 127  
 bulk state, *cis*-polyisoprene in the 1
- chain diffusion 146  
 – dynamics, local 1, 16  
 – fragmentation 146  
 –, freely rotating 16  
 chains with fixed ends 16  
 characterization, polymer 127  
*cis*-polyisoprene in the bulk state 1  
 cluster size, equilibrium 35  
 clusters 105  
 coefficient, Onsager 66  
 coil-globule-transition 142, 156  
 colloidal crystal 69  
 composite liquids, rod/sphere 165  
 composition fluctuations 58  
 computer simulation 13  
 concentrated solutions 113, 124  
 concentration fluctuations 72, 75  
 configurational transitions 16  
 cooperative diffusion 138  
 – mode 109  
 copolymer, diblock 58, 72, 88, 101, 117  
 –, block 61, 69, 83, 97  
 correlation length, static, dynamic 35  
 – spectroscopy, photon 61  
 –, photon 113  
 coupling model 72, 135  
 –, mode-mode 66  
 critical phenomena 66  
 crystal, colloidal 69  
 cubic 69
- decomposition, spinodal 80  
 dense systems anisotropic polarizability 16  
 depolarized Rayleigh scattering 58  
 di-2-ethylhexyl phthalate 28
- diblock copolymer 58, 72, 88, 101, 117  
 dielectric measurements 158  
 – relaxation 39, 124  
 – spectroscopy 20, 58  
 diffusion 31, 153, 165  
 –, chain 146  
 –, cooperative 138  
 –, segmental 121  
 –, self- 55  
 –, tracer 55, 149  
 dynamic correlation length, static 35  
 – light scattering 72, 117, 135, 138, 153, 165  
 – – –, static 35  
 –, local chain 1, 16  
 –, microscopic 130  
 – of glass forming liquids 35  
 – of the  $\alpha$ -relaxation 24  
 –, polymer 127  
 – rotational isomeric state formalism 1  
 – scattering 109
- effects, annealing 51  
 ellipsometry 83  
 ends, chains with fixed 16  
 entanglements 130, 158  
 environment, fluctuating 1  
 –, restrictive 16  
 equilibrium cluster size 35
- films, thin 88, 97, 101  
 fixed ends, chains with 16  
 fluctuating environment 1  
 fluctuation model, bond 5  
 –, composition 58  
 –, concentration 72  
 formalism, dynamic rotational isomeric state 1  
 forming liquids, dynamics of glass 35  
 fragmentation, chain 146  
 freely rotating chain 16
- gels 105  
 glass forming liquids, dynamics of 35  
 – – polymeric systems 24  
 –, porous 153  
 – transition 5, 8, 24, 28, 31, 43
- incoherent neutron scattering 28  
 interactions, polymer-surfactant 156  
 interdiffusion 8
- interdiffusive mode 109  
 isomeric state formalism, dynamic rotational 1
- kinetics, phase separation 51
- laser light scattering 142  
 length, static, dynamic correlation 35  
 light scattering 43, 46, 66, 127, 149  
 – –, dynamic 72, 117, 135, 138, 153, 165  
 – –, laser 142  
 – –, static, dynamic 35  
 liquids, dynamics of glass forming 35  
 –, rod/sphere composite 165  
 local chain dynamics 1, 16  
 longitudinal relaxation 162
- material, viscoelastic 80  
 measurements, dielectric 158  
 media, non-ergodic 149  
 melts 105, 121  
 –, polymer 130  
 method, Monte Carlo 5  
 micelle 69  
 microphase separation 51  
 – – transition 61  
 microscopic dynamics 130  
 miscible blend 75  
 mixtures, polymer 66, 121  
 –, ternary 109  
 mobility 13  
 mode-mode coupling 66  
 model, bond fluctuation 5  
 –, coupling 72, 135  
 modification, solvent 135  
 Monte Carlo method 5  
 motion, segmental 1, 80
- networks 121  
 neutron reflectivity 88, 93, 97  
 – reflectometry 83, 101  
 – scattering 105, 146  
 – –, incoherent 28  
 – –, quasielastic 24  
 – spin-echo 130  
 – – spectroscopy 121  
 NMR, PFG- 55  
 non-ergodic media 149  
 nonexponential behavior 39  
 nonselective solvent 117  
 normal-mode relaxation 158  
 nuclear reaction analysis 93, 101

- Onsager coefficient 66  
order 101  
ordering, surface 97  
PCS 20  
percolation 105  
PFG-NMR 55  
phase separation kinetics 51  
phenomena, critical 66  
photon correlation 113  
– – spectroscopy 61, 124  
phtalate, di-2-ethylhexyl 28  
PIMA 20  
plasticizers 31  
plot, Arrhenius 158  
PMMA 20  
polarizability, dense systems  
  anisotropic 16  
poly(ethylene oxide) 55  
poly(methylphenyl siloxane) 162  
poly(N-isopropylacrylamide) 156  
poly(siloxane) 55  
polyelectrolyte 142  
polyethylene 127  
polymer 31, 105  
– blends 8, 80, 146  
– chain collapse 142  
– characterization 127  
– diffusion 93  
– dynamics 127  
–, LC 13  
– melts 130  
– mixtures 66, 121  
–, semirigid 153  
– solution 138  
polymer-surfactant interactions 156  
polymeric systems, glass-forming 24  
polystyrene 113, 142  
polyurethanes, segmented 51  
porous glass 153  
primary relaxation 58  
quasielastic neutron scattering 24  
Rayleigh scattering, depolarized 58  
reflection, neutron 93  
reflectivity, neutron 88, 97  
reflectometry, neutron 83, 101  
relaxation 20, 43, 80  
–, dielectric 124  
–, longitudinal 162  
–, normal-mode 158  
–, primary 58  
–, reorientational 162  
–, structural 46  
– techniques 24  
– times 113  
reorientational relaxation 162  
reptation 93, 130  
restrictive environment 16  
rod/sphere composite liquids 165  
rotating chain, freely 16  
rotational isomeric state formalism,  
  dynamic 1  
Rouse model 93  
scaling behavior 43  
scattering, dynamic 109  
–, dynamic light 72, 117, 135, 138,  
  153, 165  
–, incoherent neutron 28  
–, laser light 142  
–, light 43, 46, 66, 127, 149  
–, neutron 105, 146  
–, quasielastic neutron 24  
–, small-angle x-ray 61  
–, static, dynamic light 35  
segmental diffusion 121  
– motion 1, 80  
– relaxation 75  
segmented polyurethanes 51  
self-diffusion 5, 55  
semidilute solution 117, 127  
semirigid polymers 153  
separation kinetics, phase 51  
–, microphase 51  
– transition, microphase 61  
simulation, computer 13  
size, equilibrium cluster 35  
small-angle x-ray scattering 61  
solution, concentrated 113, 124  
–, polymer 138  
–, semidilute 117, 127  
solvent modification 135  
–, nonselective 117  
spectroscopy, dielectric 20, 58  
–, neutron spin echo 121  
–, photon correlation 61, 124  
sphere composite liquids, rod 165  
spin-echo, neutron 130  
spinodal decomposition 80  
state formalism, dynamic rotational  
  isomeric 1  
–, *cis*-polyisoprene in the bulk 1  
static, dynamic correlation length 35  
–, dynamic light scattering 35  
strong-fragile 46  
structural relaxation 46  
surface ordering 97  
surface-force apparatus 83  
synchrotron SAXS 51  
systems anisotropic polarizability,  
  dense 16  
–, glass-forming polymeric 24  
techniques, relaxation 24  
ternary mixtures 109  
times, relaxation 113  
tracer diffusion 55, 149  
transition, coil-to-globule 142, 156  
–, configurational 16  
–, glass 5, 8, 24, 28, 31, 43  
–, microphase separation 61  
viscoelastic material 80  
viscoelasticity 138  
x-ray scattering, small-angle 61