

163. L. Pastewka and M. O. Robbins, "When are rough surfaces sticky?" PNAS in press.
162. K. M. Salerno and M. O. Robbins, "The effect of inertia on sheared amorphous solids: Critical scaling of avalanches in two and three dimensions," *Phys. Rev. E* **88**, 062206 (2013).
161. T. Ge, G. S. Grest and M. O. Robbins, "Structure and Strength at Immiscible Polymer Interfaces," *ACS Macro Letters* **2**, 882-886 (2013) ([arXiv:1310.3882](https://arxiv.org/abs/1310.3882), [10.1021/mz400407m](https://doi.org/10.1021/mz400407m))
160. L. Pastewka, N. Prodanov, B. Lorenz, M. H. Muser, M. O. Robbins and B. N. J. Persson, "Finite-size scaling in the interfacial stiffness of rough elastic contacts," *Phys. Rev. E* **87**, 062809 (2013). ([arXiv:1210.4635](https://arxiv.org/abs/1210.4635) [10.1103/PhysRevE.87.062809](https://doi.org/10.1103/PhysRevE.87.062809)).
159. M. Cieplak and M. O. Robbins, "Nanoindentation of 35 virus capsids in a molecular model: Relating mechanical properties to structure," *PLOS ONE* **8**(6): e63640 (2013). ([10.1371/journal.pone.0063640](https://doi.org/10.1371/journal.pone.0063640)).
158. T. Ge, F. Pierce, D. Perahia, G. S. Grest and M. O. Robbins, "Molecular Dynamics Simulations of Polymer Welding: Strength from Interfacial Entanglements," *Phys. Rev. Lett.* **110**, 098301 (2013). ([10.1103/PhysRevLett.110.098301](https://doi.org/10.1103/PhysRevLett.110.098301)).
157. K. M. Salerno, C. E. Maloney and M. O. Robbins, "Avalanches in Strained Amorphous Solids: Does Inertia Destroy Critical Behavior?" *Phys. Rev. Lett.* **109**, 105703 (2012) ([10.1103/PhysRevLett.109.105703](https://doi.org/10.1103/PhysRevLett.109.105703)).
156. L. Pastewka, T. A. Sharp and M. O. Robbins, "Seamless elastic boundaries for atomistic calculations," *Phys. Rev. B* **86**, 075459 (2012) ([10.1103/PhysRevB.86.075459](https://doi.org/10.1103/PhysRevB.86.075459)).
155. J. Liu, M. Wang, S. Chen and M. O. Robbins, "Uncovering Molecular Mechanisms of Electrowetting and Saturation with Simulations," *Phys. Rev. Lett.* **108**, 216101 (2012) ([10.1103/PhysRevLett.108.216101](https://doi.org/10.1103/PhysRevLett.108.216101)).
154. P. M. McGuiggan, D. M. Grave, J. S. Wallace, S. Cheng, A. Prosperetti, and M. O. Robbins, "Dynamics of a Disturbed Sessile Drop Measured by Atomic Force Microscopy," *Langmuir* **27**, 11966-11972 (2011) ([10.1021/la2023709](https://doi.org/10.1021/la2023709)).
153. S. Akarapu, T. Sharp and M. O. Robbins, "Stiffness of Contacts between Rough Surfaces," *Phys. Rev. Lett.* **106**, 204301 (2011). ([10.1103/PhysRevLett.106.204301](https://doi.org/10.1103/PhysRevLett.106.204301)).
152. S. B. Ramisetty, C. Campañá, G. Anciaux, J.-F. Molinari, M. H. Muser and M. O. Robbins, "The autocorrelation function for island areas on self-affine surfaces," *J. Phys.: Condens. Matter* **23**, 215004 (2011) ([10.1088/0953-8984/23/215004](https://doi.org/10.1088/0953-8984/23/215004)).
151. B. Koiller and M. O. Robbins, "Growth and morphology transitions in anisotropic disordered media," *Phys. Rev. B* **82**, 064202 (2010). ([10.1103/PhysRevB.82.064202](https://doi.org/10.1103/PhysRevB.82.064202)).
150. S. Cheng and M. O. Robbins, "Defining Contact at the Atomic Scale," *Tribol. Lett.* **39**, 329-348 (2010). ([Doi:10.1007/s11249-010-9682-5](https://doi.org/10.1007/s11249-010-9682-5)).
149. J. Liu, M. Wang, S. Chen and M. O. Robbins, "Molecular Simulations of Electroosmotic Flows in Rough Nanochannels," *J. Comput. Phys.* **229**, 7834-7847 (2010). ([doi:10.1016/j.jcp.2010.08.042](https://doi.org/10.1016/j.jcp.2010.08.042))

148. T. Ge and M. O. Robbins, "Anisotropic plasticity and chain orientation in polymer glasses," *J. Polymer Sci. B: Polymer Physics* **48**, 1473-1482 (2010). ([doi:10.1002/polb.22015](https://doi.org/10.1002/polb.22015)).
147. R. S. Hoy and M. O. Robbins, "Strain hardening in bidisperse polymer glasses: Separating the roles of chain orientation and interchain entanglement," *J. Chem. Phys.* **131**, 244901 (2009). ([doi:10.1063/1.3276800](https://doi.org/10.1063/1.3276800)).
146. M. Cieplak and M. O. Robbins, "Nanoindentation of virus capsids in a molecular model," *J. Chem. Phys.* **132**, 015101 (2010). ([doi:10.1063/1.3276287](https://doi.org/10.1063/1.3276287)).
145. S. Cheng, B. Luan and M. O. Robbins, "Contact and Friction of Nano-Asperities: Effects of Adsorbed Monolayers," *Phys. Rev. E* **81**, 016102 (2010). ([10.1103/PhysRevE.81.016102](https://doi.org/10.1103/PhysRevE.81.016102)).
arXiv:0909.4566
144. B. Luan and M. O. Robbins, "Hybrid Atomistic/Continuum Study of Contact and Friction Between Rough Solids," *Tribol. Lett.*, **36**, 1-16 (2009). ([doi: 10.1007/s11249-009-9453-3](https://doi.org/10.1007/s11249-009-9453-3))
143. M. O. Robbins and R. S. Hoy, "Scaling of the Strain Hardening Modulus of Glassy Polymers with the Flow Stress," *J. Polymer Sci. B: Polymer Physics* **47**, 1406-1411 (2009). ([doi: 10.1002/polb.21734](https://doi.org/10.1002/polb.21734))
142. C. E. Maloney and M. O. Robbins, "Long-ranged anisotropic strain correlations in sheared amorphous solids," *Phys. Rev. Lett.* **102**, 225502 (2009). ([10.1103/PhysRevLett.102.225502](https://doi.org/10.1103/PhysRevLett.102.225502))
141. J. Liu, S. Chen, X. Nie, and M. O. Robbins, "A Continuum-Atomistic Multi-Timescale Algorithm for Micro/Nano Flows," *Comm. Comp. Phys.* **4**, 1279-1291 (2008).
140. C. Campañá, M. H. Müser, and M. O. Robbins, "Elastic contact between self-affine surfaces: Comparison of numerical stress and contact correlation functions with analytic predictions," *J. Phys.: Condens. Matter* **20**, 354013 (2008). ([doi:10.1088/0953-8984/20/35/354013](https://doi.org/10.1088/0953-8984/20/35/354013))
139. C. E. Maloney and M. O. Robbins, "Evolution of displacements and strains in sheared amorphous solids," *J. Phys.: Condens. Matter* **20**, 244128 (2008). ([doi:10.1088/0953-8984/20/24/244128](https://doi.org/10.1088/0953-8984/20/24/244128))
138. R. S. Hoy and M. O. Robbins, "Strain Hardening of Polymer Glasses: Entanglements, Energetics and Plasticity," *Phys. Rev. E* **77**, 031801 (2008). ([doi:10.1103/PhysRevE77.031801](https://doi.org/10.1103/PhysRevE77.031801))
137. C. E. Maloney and M. O. Robbins, "Shear faults in a model brittle solid," *Chaos* **17**, 041105 (2007). ([doi:10.1063/1.2786010](https://doi.org/10.1063/1.2786010))
- [136. R. S. Hoy and M. O. Robbins, "Strain Hardening in Polymer Glasses: Limitations of Network Models," *Phys. Rev. Lett.* **99**, 117801 \(2007\). \(doi:10.1103/PhysRevLett.99.117801\)](https://doi.org/10.1103/PhysRevLett.99.117801)
- [135. J. Liu, S. Chen, X. Nie and M. O. Robbins, "A continuum-atomistic simulation of heat transfer in micro- and nano-flows," *J. Comp. Phys.* **227**, 279-291 \(2007\). \(doi:10.1016/j.jcp.2007.07.014\)](https://doi.org/10.1016/j.jcp.2007.07.014)

- [134. S. Hyun and M. O. Robbins, "Elastic Contact Between Rough Surfaces: Effect of Roughness at Large and Small Wavelengths," *Tribology International*, **40**, 1413-1422 \(2007\). \(doi:10.1016/j.triboint.2007.02.003\)](#)
- [133. C. Denniston and M. O. Robbins, "General continuum boundary conditions for miscible binary fluids from molecular dynamics simulations," *J. Chem. Phys.* **125**, 214102 \(2006\).](#)
- [132. R. S. Hoy and M. O. Robbins, "Strain Hardening of Polymer Glasses: Effect of Entanglement Density, Temperature and Rate," *J. Polymer Sci. B: Polymer Physics* **44**, 3487-3500 \(2006\).](#)
- [131. B. Luan and M. O. Robbins, "Contact of Single Asperities with Varying Adhesion: Comparing Continuum Mechanics to Atomistic Simulations," *Phys. Rev.* **E74**, 026111 \(2006\).](#)
- [130. B. Luan, S. Hyun, J. F. Molinari, N. Bernstein, and Mark O. Robbins, "Multiscale modeling of two-dimensional contacts," *Phys. Rev.* **E74**, 046710 \(2006\).](#)
- [129. X. Nie, M. O. Robbins and S. Chen, "Resolving singular forces in cavity flow: Multiscale modeling from atomic scales to millimeters," *Phys. Rev. Lett.* **96**, 134501 \(2006\).](#)
- [128. R. S. Hoy and M. O. Robbins, "Effect of Equilibration on Primitive Path Analyses of Entangled Polymers," *Phys. Rev. E* **72**, 061802 \(2005\).](#)
- [127. J. Rottler and M. O. Robbins, "Unified description of aging and rate effects in yield of glassy solids," *Phys. Rev. Lett.* **95**, 225504 \(2005\).](#)
- [126. L. Pei, S. Hyun, J.-F. Molinari, and M. O. Robbins, "Finite element modeling of elastoplastic contact between rough surfaces," *J. Mech. Phys. Sol.* **53**, 2385-2409 \(2005\).](#)
- [125. B. Luan and M. O. Robbins, "The breakdown of continuum models for mechanical contacts," *Nature* **435**, 929-932 \(2005\).](#)
- [124. B. Luan, S. Hyun, M. O. Robbins and N. Bernstein, "Multiscale Modeling of Two Dimensional Rough Surface Contacts," in *Fundamentals of Nanoindentation and Nanotribology*, edited by K. J. Wahl, N. Huber, A. B. Mann, D. F. Bahr, and Y.-T. Cheng \(Materials Research Society Proceedings **841**, Warrendale, PA, 2005\), R7.4 \(Ribbon Award Winner\).](#)
- [123. J. Rottler and M. O. Robbins, "Macroscopic friction laws and shear yielding of glassy solids," *Comp. Phys. Comm.* **169** 177-182, \(2005\).](#)
- [122. J. Rottler and M. O. Robbins, "Craze Formation and the Fracture Energy of Glassy Polymers," 2004 Gallery of Nonlinear Images, *Chaos* **14**, S5 \(2004\).](#)
- [121. X. Nie, S. Chen and M. O. Robbins, "Hybrid Continuum-Atomistic Simulation of Singular Corner Flow," *Physics of Fluids* **16**, 3579-3591 \(2004\).](#)
- [120. M. Cieplak, T. X. Hoang and M. O. Robbins "Stretching of Homopolymers and Contact Order," *Phys. Rev. E* **70**, 011917 \(2004\).](#)
- [119. B. Luan and M. O. Robbins, "Effect of inertia and elasticity on stick-slip motion," *Phys. Rev. Lett.* **93**, 036105 \(2004\).](#)

- [118. S. Hyun, L. Pei, J.-F. Molinari and M. O. Robbins, "Finite-element analysis of contact between elastic self-affine surfaces," Phys. Rev. E **70**, 026117 \(2004\) and cond-mat/0404237.](#)
- [117. R. S. Hoy and M. O. Robbins, "Fcc-bcc transition for Yukawa interactions determined by applied strain deformation," Phys. Rev. E **69**, 056103 \(2004\) and cond-mat/0401045.](#)
- [116. C. Denniston and M. O. Robbins, "Mapping molecular models to continuum theories for partially miscible fluids," Phys. Rev. E **69**, 021505 \(2004\).](#)
- [115. J. Ringlein and M. O. Robbins, "Understanding and illustrating the atomic origins of friction," Am. J. Phys. **72**, 884-891 \(2004\).](#)
- [114. M. O. Robbins and J. Rottler, "Polymer Glasses, Simulation of Crazing and Fracture," in "Encyclopedia of Materials Science and Technology," \(Elsevier, Amsterdam, 2004\).](#)
- [113. X. B. Nie, S. Y. Chen, W. N. E and M. O. Robbins, "A Continuum and Molecular Dynamics Hybrid Method for Micro- and Nano-Fluid Flow," J. Fluid Mech. **500**, 55-64 \(2004\).](#)
- [112. M. Cieplak, T.-X. Hoang, and M. O. Robbins, "Thermal Effects in Stretching of Go-like Models of Titin and Secondary Structures," Proteins: Struct. Funct. Bio. **56**, 285 \(2004\).](#)
- [111. M. Cieplak, T.-X. Hoang, and M. O. Robbins, "Stretching of Proteins in the Entropic Limit," Phys. Rev. E **69**, 011912 \(2004\).](#)
- [110. J. Rottler and M. O. Robbins, "Shear yielding of amorphous glassy solids: Effect of temperature and strain rate," Phys. Rev. E **68**, 011507 \(2003\) and cond-mat/0303276.](#)
- [109. M. H. Müser and M. O. Robbins, "Atomistic Computer Simulations of Friction Between Solids," invited chapter in "Springer Handbook of Nanotechnology," Edited by B. Bhushan, \(Springer-Verlag, Berlin, 2004\) pp. 717-738. \(10.1002/0471428019.ch5\)](#)
- [108. J. Rottler and M. O. Robbins "Growth, microstructure, and failure of crazes in glassy polymers," Phys. Rev. E **68**, 011801 \(2003\).](#)
- [107. M. Tsige, T. Soddemann, S. B. Rempe, G. S. Grest, J. D. Kress, M. O. Robbins, S. W. Sides, M. J. Stevens and E. Webb, III, "Interactions and Structure of Poly\(dimethylsiloxane\) at Silicon Dioxide Surfaces: Electronic Structure and Molecular Dynamics Studies," J. Chem. Phys. **118**, 5132-5142 \(2003\).](#)
- [106. J. Rottler and M. O. Robbins, "Molecular simulations of deformation and failure in bonds formed by glassy polymer adhesives," J. Adh. Sci.Tech. **17**, 369-381 \(2003\).](#)
- [105. J. Rottler and M. O. Robbins, "Jamming under tension in polymer crazes," Phys. Rev. Lett. **89**, 195501 \(2002\).](#)
- [104. C. Denniston and M. O. Robbins, "Mapping molecular simulations to continuum models for binary fluids," in Computer Simulation Studies in Condensed Matter Physics XV, Eds. D.P. Landau, S.P. Lewis, and H.B. Schüttler \(Springer Verlag, Heidelberg, Berlin, 2002\).](#)

- [103. M. H. Müser, M. Urbakh, and M. O. Robbins, "Statistical Mechanics of Static and Low-Velocity Kinetic Friction," *Advances in Chemical Physics*, **126**, 187-272 \(2003\).](#)
- [102. J. Rottler, S. Barsky, and M. O. Robbins, "Cracks and Crazes: On calculating the macroscopic fracture energy of glassy polymers from molecular simulations," *Phys. Rev. Lett.* **89**, 148304 \(2002\) and \[cond-mat/0112006\]\(#\).](#)
- [101. M. Cieplak, T. X. Hoang, and M. O. Robbins, "Folding and Stretching in a Go-like Model of Titin," *Proteins: Structure, Function, and Genetics*, **49**, 114-124 \(2002\) and \[cond-mat/0112201\]\(#\).](#)
- [100. M. Cieplak, T. X. Hoang, and M. O. Robbins, "Thermal Folding and Mechanical Unfolding Pathways of Protein Secondary Structures," *Proteins: Structure, Function, and Genetics* **49**, 104-113 \(2002\) and \[cond-mat/0112200\]\(#\).](#)
- [99. S. Barsky and M. O. Robbins, "Bulk and Interfacial Shear Thinning of Immiscible Polymers," *Phys. Rev. E* **65**, 021808 \(2002\) and \[cond-mat/0108405\]\(#\).](#)
- [98. C. Denniston and M. O. Robbins, "Molecular and continuum boundary conditions for a miscible binary fluid," *Phys. Rev. Lett.* **87**, 178302 \(2001\) and \[cond-mat/0105383\]\(#\).](#)
- [97. J. Rottler and M. O. Robbins, "Yield conditions for deformation of amorphous polymer glasses," *Phys. Rev. E* **64**, 051801 \(2001\) and \[cond-mat/0104494\]\(#\).](#)
- [96. G. He and M. O. Robbins, "Simulations of the Static Friction Due to Adsorbed Molecules," *Phys. Rev. B* **64**, 035413 \(2001\).](#)
- [95. S. Barsky and M. O. Robbins, "Molecular dynamics study of slip at the interface between immiscible polymers," *Phys. Rev. E* **63**, 021801 \(2001\).](#)
- [94. G. He and M. O. Robbins, "Simulations of the kinetic friction due to adsorbed surface layers," *Tribology Letters* **10**, 7-14 \(2001\) and \[cond-mat/0008196\]\(#\).](#)
- [93. A. Baljon and M. O. Robbins, "Simulations of Crazing in Polymer Glasses: Effect of Chain Length and Surface Tension," *Macromolecules* **34**, 4200-4209 \(2001\).](#)
- [92. G. He and M. O. Robbins, "Scale effects and the molecular origins of tribological behavior," in *"Nanotribology: Critical Assessment and Research Needs,"* Edited by S. M. Hsu and Z. C. Ying \(Kluwer, Dordrecht, 2003\), pp. 29-44.](#)
- [91. M. H. Müser, L. Wenning, and M. O. Robbins, "Simple Microscopic Theory of Amontons' Laws for Static Friction," *Phys. Rev. Lett.* **86**, 1295-1298 \(2001\) and \[cond-mat/0004494\]\(#\).](#)
- [90. B. Koiller and M. O. Robbins, "Morphology transitions in three-dimensional domain growth with Gaussian random fields," *Phys. Rev. B*, **62**, 5771-5778 \(2000\) and \[cond-mat/004183\]\(#\).](#)
- [89. M. O. Robbins and M. H. Müser, "Computer Simulations of Friction, Lubrication and Wear," in *Modern Tribology Handbook*, Edited by B. Bhushan \(CRC Press, Boca Raton, 2001\), pp. 717-765 and \[cond-mat/0001056\]\(#\).](#)

88. M. O. Robbins, "Jamming, Friction and Unsteady Rheology," in *Jamming and Rheology: Constrained dynamics on microscopic and macroscopic scales*, Edited by A. J. Liu and S. R. Nagel (Taylor and Francis, London, 2000) and cond-mat/9912337.

[87. M. H. Müser and M. O. Robbins, "Conditions for static friction between flat, crystalline surfaces," *Phys. Rev. B* **61**, 2335-2342 \(2000\).](#)

[86. O. Vafeek and M. O. Robbins, "Molecular Dynamics Study of the Stress Singularity at a Corner," *Phys. Rev. B* **60**, 12002-12006 \(1999\).](#)

[85. G. He, M. H. Müser and M. O. Robbins, "Adsorbed Layers and the Origin of Static Friction," *Science* **284**, 1650-1652 \(1999\). \(10.1126/science.284.5420.1650\)](#)

84. M. O. Robbins and A. R. C. Baljon, "Response of Thin Oligomer Films to Steady and Transient Shear," in *Microstructure and Microtribology of Polymer Surfaces*, ACS Symposium Series vol. 741, Edited by V. V. Tsukruk and K. J. Wahl, (American Chemical Society, Washington DC, 1999), pp. 91-115.

83. M. O. Robbins and J. Krim, "Energy Dissipation in Interfacial Friction," *Materials Research Society Bulletin*, June 1998, **23**(6), 23-26 (1998).

[82. D. Gersappe and M. O. Robbins, "Where do Polymer Adhesives Fail?" *Europhys. Lett.* **48**\(2\), 150-155 \(1999\).](#)

[81. A. R. C. Baljon and M. O. Robbins, "A Molecular View of Bond Rupture," *Theoretical and Computational Polymer Science* **9**, 35-40 \(1999\).](#)

80. A. R. C. Baljon and M. O. Robbins, "Adhesion and Friction of Thin Films," in special issue on "Theory and Simulation of Polymers at Interfaces", *Materials Research Society Bulletin*, **22** (1), 22-26 (1997).

79. A. R. C. Baljon and M. O. Robbins, "Stick-Slip Motion, Transient Behavior, and Memory in Confined Films," in *Micro/Nanotribology and its Applications*, Edited by B. Bhushan (Kluwer, Amsterdam, 1997) pp. 533-553.

[78. E. D. Smith, M. O. Robbins and M. Cieplak, "Friction on Adsorbed Monolayers," *Phys. Rev.* **B54**, 8252 \(1996\).](#)

[77. S. Kumar, M. O. Robbins, and D. H. Reich, "An Experimental Study of the Dynamics of Contact Lines," in *Disordered Materials and Interfaces*, *Materials Research Society Symposia Proceedings* Vol. 407, Edited by H. Z. Cummins, D. J. Durian, D. L. Johnson and H. E. Stanley, \(MRS, Pittsburgh, 1996\), pp. 21-25.](#)

[76. M. O. Robbins and E. D. Smith, "Connecting Molecular-Scale and Macroscopic Tribology," *Langmuir* **12**, 4543-47 \(1996\).](#)

[75. A. R. C. Baljon and M. O. Robbins, "Energy Dissipation During Rupture of Adhesive Bonds," *Science* **271**, 482-484 \(1996\).](#)

[74. M. J. Stevens, Michael L. Falk and M. O. Robbins, "Interactions between Charged Spherical Macroions," *J. Chem. Phys.* **104**, 5209-5219 \(1996\).](#)

[73. S. Kumar, D. H. Reich and M. O. Robbins, "Critical dynamics of contact-line motion," *Phys. Rev. E* **52**, R5776 \(1995\).](#)

[72. P. A. Thompson, M. O. Robbins and G. S. Grest, "Structure and Shear Response in Nanometer Thick Films," *Israel Journal of Chemistry* **35**, 93 \(1995\).](#)

71. B. Koiller, M. O. Robbins, Hong Ji and C. S. Nolle, "Morphology and Dynamics of Domain-Wall Motion in Disordered Two-Dimensional Magnets," in *New Trends in Magnetism, Magnetic Materials and their Applications*, J. L. Moran-Lopez and J. M. Sanchez (Eds.) (Plenum, New York, 1994) pp. 75-84.

[70. M. Cieplak, E. D. Smith and M. O. Robbins, "Molecular origins of friction: The force on adsorbed layers," *Science* **265**, 1209-1212 \(1994\).](#)

69. C. S. Nolle, B. Koiller, N. Martys and M. O. Robbins, "Effect of quenched disorder on moving interfaces in two dimensions," *Physica A* **205**, 342-354 (1994).

[68. M. J. Stevens and M. O. Robbins, "Simulations of Shear-Induced Melting and Ordering," *Phys. Rev. E* **48**, 3778 \(1993\).](#)

[67. C. S. Nolle, B. Koiller, N. Martys and M. O. Robbins, "Morphology and Dynamics of Interfaces in Random Two-Dimensional Media," *Phys. Rev. Lett.* **71**, 2074 \(1993\).](#)

66. M. O. Robbins, P. A. Thompson and G. S. Grest, "Simulations of Lubrication by Nanometer Thick Films," *MRS Bulletin* **18** (5), 45-49 (1993).

65. P. A. Thompson, M. O. Robbins and G. S. Grest, "Simulations of Lubricant Behavior at the Interface With Bearing Solids," in *Thin Films in Tribology*, edited by D. Dowson, C. M. Taylor, T. H. C. Childs, M. Godet and G. Dalmaz (Elsevier, Amsterdam, 1993), pp. 347-360.

64. P. A. Thompson, M. O. Robbins and G. S. Grest, "Structure and Dynamics of Confined Films," in *Computations for the Nano-Scale*, edited by P. Böchl, C. Joachim, and A. J. Fisher, (Kluwer, Dordrecht, 1993), p. 127.

[63. M. J. Stevens and M. O. Robbins, "Melting of Yukawa Systems: A Test of Phenomenological Melting Criteria," *J. Chem. Phys.* **98**, 2319-2324 \(1993\).](#)

[62. P. A. Thompson, W. B. Brinckerhoff and M. O. Robbins, "Microscopic Studies of Static and Dynamic Contact Angles," *J. Adhesion Science and Technology* **7**, 535-554 \(1993\).](#)

[61. Hong Ji and M. O. Robbins, "Percolative, self-affine and faceted domain growth in random three-dimensional magnets", *Phys. Rev. B* **46**, 14519 \(1992\).](#)

60. M. Cieplak and M. O. Robbins, "Critical Phenomena in Fluid Invasion: Transitions in Growth Morphology," in *Surface Disorder: Growth, Roughening and Phase Transitions*, Edited by R. Jullien, J. Kertész, P. Meakin and D. E. Wolf (Nova Science Publishers, New York, 1992), pp 185-192.

59. [M. O. Robbins, M. Cieplak, H. Ji, B. Koiller and N. Martys, "Growth in Systems with Quenched Disorder," in *Growth Patterns in Physical Sciences and Biology*, edited by J. M. Garcia-Ruiz, L. Sander and P. Meakin \(Plenum Press, New York, 1993\) pp. 65-75.](#)
58. [B. Koiller, Hong Ji and M. O. Robbins, "Effect of Disorder and Lattice Type on Domain-Wall Motion in Two Dimensions," *Phys. Rev.* **B46**, 5258 \(1992\).](#)
57. [P. A. Thompson, G. S. Grest and M. O. Robbins, "Phase Transitions and Universal Dynamics in Confined Films," *Phys. Rev. Lett.* **68**, 3448 \(1992\).](#)
56. [B. Koiller, Hong Ji and M. O. Robbins, "Fluid wetting properties and the invasion of square networks," *Phys. Rev.* **B45**, 7762 \(1992\).](#)
55. [N. Martys, M. O. Robbins and M. Cieplak, "Scaling relations for interface motion through disordered media: Application to fluid invasion," *Phys. Rev.* **B44**, 12294 \(1991\).](#)
54. [M. O. Robbins and P. A. Thompson, "Critical Velocity of Stick-Slip Motion," *Science* **253**, 916 \(1991\).](#)
53. [Hong Ji and M. O. Robbins, "Transition from compact to self-similar growth in disordered systems: fluid invasion and magnetic domain growth," *Phys. Rev.* **A44**, 2538 \(1991\).](#)
52. [M. J. Stevens, M. O. Robbins and J. F. Belak "Shear-Melting of Colloids: A Non-Equilibrium Phase Diagram," *Phys. Rev. Lett.* **66**, 3004 \(1991\).](#)
51. [M. O. Robbins, D. Andelman, and J. F. Joanny, "Thin Liquid Films on Rough or Heterogeneous Solids," *Phys. Rev.* **A43**, 4344 \(1991\).](#)
50. [N. Martys, M. Cieplak and M. O. Robbins, "Critical Phenomena in Fluid Invasion of Porous Media," *Phys. Rev. Lett.* **66**, 1058 \(1991\).](#)
49. [S. Bhattacharya, J. P. Stokes and M. O. Robbins, "Inductive Anomaly and Noise Spectrum of a Sliding-Charge-Density-Wave Conductor," *Phys. Rev.* **B43**, 1835 \(1991\).](#)
48. [P. A. Thompson and M. O. Robbins, "To Slip or Not to Slip?," *Physics World*, November, 1990, p. 35.](#)
47. [J. Israelachvili, P. McGuiggan, M. Gee, A. Homola, M. O. Robbins, and P. A. Thompson, "Liquid Dynamics in Molecularly Thin Films," *J. Phys.: Condens. Matter* **2**, SA89 \(1990\).](#)
46. [P. A. Thompson and M. O. Robbins, "Origin of Stick-Slip Motion in Boundary Lubrication," *Science* **250**, 792 \(1990\).](#)
45. [J. P. Stokes, M. J. Higgins, A. P. Kushnick, S. Bhattacharya, and M. O. Robbins, "Harmonic Generation As a Probe of Contact Line Dynamics," *Phys. Rev. Lett.* **65**, 1885 \(1990\).](#)
44. [M. O. Robbins, G. S. Grest, and K. Kremer, "Effect of Finite System Size on Thermal Fluctuations: Implications for Melting," *Phys. Rev.* **B42**, 5579 \(1990\).](#)

[43. P. A. Thompson and M. O. Robbins, "Shear Flow Near Solids: Epitaxial Order and Flow Boundary Conditions," Phys. Rev. A**41**, 6830 \(1990\).](#)

[42. M. J. Stevens and M. O. Robbins, "Density Functional Theory of Interactions Between Charged Macroions in Solution," *Macromolecular Liquids*, Materials Research Society Symposia Proceedings Vol. 177, Edited by C. R. Safinya, S. A. Safran and P. A. Pincus, \(Materials Research Society, Pittsburgh, 1990\) p. 237.](#)

41. M. O. Robbins and P. A. Thompson, "Molecular Dynamics Simulations of Contact Line Motion," *Macromolecular Liquids*, Materials Research Society Symposia Proceedings Vol. 177, Edited by C. R. Safinya, S. A. Safran and P. A. Pincus, (Materials Research Society, Pittsburgh, 1990) p. 411.

[40. M. Cieplak and M. O. Robbins, "Influence of Contact Angle on Quasi-Static Fluid Invasion," Phys. Rev. B**41**, 11508 \(1990\).](#)

[39. M. J. Stevens and M. O. Robbins, "Density Functional Theory of Ionic Screening: When do Like Charges Attract?," Europhys. Lett. **12**, 81 \(1990\).](#)

[38. J. F. Joanny and M. O. Robbins, "Motion of a Contact Line on a Heterogeneous Surface," J. Chem. Phys. **92**, 3206 \(1990\).](#)

[37. B. Koiller and M. O. Robbins, "Elastic Energies and Order in Epitaxial Si-Ge Alloys," Phys. Rev. B: Rapid Communications **40**, 12554 \(1989\).](#)

[36. S. Bhattacharya, J. P. Stokes and M. O. Robbins, "Broadband-Noise Spectrum in Sliding-Charge-Density-Wave Conductors," Phys. Rev. B: Rapid Communications **40**, 5826 \(1989\).](#)

35. D. Andelman, J. F. Joanny and M. O. Robbins, "Wetting of Rough Solid Surfaces by Liquids," Proceedings of NATO ASI on Phase Transitions in Soft Condensed Matter, Geilo, Norway, April 1989.

[34. P. A. Thompson and M. O. Robbins, "Simulations of Contact-Line Motion: Slip and the Dynamic Contact Angle," Phys. Rev. Lett. **63**, 766 \(1989\).](#)

33. B. Koiller, M. A. Davidovich, R. Osorio, and M. O. Robbins, "Electronic Energy and Ordering in $(\text{GaAs})_{1-x}\text{Ge}_{2x}$ Alloys," Proceedings of the 19th International Conference on the Physics of Semiconductors, Warsaw, Poland. Edited by W. Zawadzki (Polish Academy of Science, Warsaw, 1988), pp. 861-4.

32. D. Andelman, J.-F. Joanny, and M. O. Robbins, "Complete Wetting on Rough Surfaces: Statics," Europhys. Lett. **7**, 731 (1988).

[31. M. A. Davidovich, B. Koiller, Roberto Osorio and M. O. Robbins, "Electronic Theory of Ordering in \$\(\text{GaAs}\)_{1-x}\text{Ge}_{2x}\$ Alloys," Phys. Rev. B**38**, 10524-10532 \(1988\).](#)

[30. N. Martys and M. O. Robbins, "Linear ac Response of a Depinned Charge-Density Wave," Phys. Rev. B**38**, 3773 \(1988\).](#)

- [29. M. Cieplak and M. O. Robbins, "Dynamical Transition in Quasi-static Fluid Invasion in Porous Media," Phys. Rev. Lett. **60**, 2042 \(1988\).](#)
- [28. J. P. Stokes, A.P. Kushnick and M. O. Robbins, "Interface Dynamics in Porous Media: A Random Field Description," Phys. Rev. Lett. **60**, 1386 \(1988\).](#)
27. M. O. Robbins, K. Kremer and G. S. Grest, "Phase Diagrams of Charge-Stabilized Colloidal Suspensions," in Ordering and Organization in Ionic Solutions, edited by N. Ise and I. Sogami (World Scientific, Singapore, 1988), pp. 607-617.
- [26. M. O. Robbins, K. Kremer, and G. S. Grest, "Phase Diagram and Dynamics of Yukawa Systems," J. Chem. Phys. **88**, 3286 \(1988\).](#)
25. K. Kremer, G. S. Grest and M. O. Robbins, "Dynamics of Supercooled Liquids Interacting with a Repulsive Yukawa Potential," J. Phys. A: Math. Gen. **20**, L181-187 (1987).
24. M. O. Robbins and J. F. Joanny, "Contact Angle Hysteresis on Random Surfaces," Europhys. Lett. **3**, 729-735 (1987).
23. R. A. Klemm and M. O. Robbins, "Charge-Density-Wave Conduction: Dynamics and Finite-Size Effects," Physica **143B**, 76-79 (1986).
- [22. M. O. Robbins and R. A. Klemm, "Charge-Density-Wave Conduction: Dynamics and Finite-Size Effects," Phys. Rev. **B34**, 8496-8506 \(1986\).](#)
- [21. K. Kremer, M. O. Robbins and G. S. Grest, "Phase Diagram of Yukawa Systems: Model for Charge-Stabilized Colloids," Phys. Rev. Lett. **57**, 2694-2697 \(1986\).](#)
- [20. J. P. Stokes, D. A. Weitz, J. P. Gollub, A. Dougherty, M. O. Robbins, P. M. Chaikin and H. M. Lindsay, "Interfacial Stability of Immiscible Displacement in a Porous Medium," Phys. Rev. Lett. **57**, 1718-1721 \(1986\).](#)
- [19. R. J. Hawkins, M. O. Robbins and J. M. Sanchez, "Electronic Structure Calculations of Binary-Alloy Phase Diagrams," Phys. Rev. **B33**, 4782-4792 \(1986\).](#)
- [18. S. A. Safran, M. O. Robbins and S. Garoff, "Tilt and Splay of Surfactants on Surfaces," Phys. Rev. **A33**, 2186-2189 \(1986\).](#)
- [17. M. O. Robbins, J. P. Stokes and S. Bhattacharya, "Charge-Density-Wave Depinning: A Dynamical Critical Phenomenon?," Phys. Rev. Lett. **55**, 2822-2825 \(1985\).](#)
- [16. J. P. Stokes, M. O. Robbins and S. Bhattacharya, "AC Response of Pinned-Charge-Density-Wave Conductors," Phys. Rev. **B32**, 6939-6941 \(1985\).](#)
- [15. M. O. Robbins and B. Koiller, "Localization Properties of Random and Partially Ordered One-Dimensional Systems," Phys. Rev. **B32**, 4576-4583 \(1985\).](#)
14. R. J. Hawkins, M. O. Robbins and J. M. Sanchez, "A Microscopic Theory of Binary Alloy Phase Equilibrium," Solid State Commun. **55**, 253-256 (1985).

[13. S. Bhattacharya, J. P. Stokes, M. O. Robbins and R. A. Klemm, "Origin of Broadband Noise in Charge-Density-Wave Conductors," Phys. Rev. Lett. **54**, 2453-2456 \(1985\).](#)

12. J. P. Stokes, M. O. Robbins, S. Bhattacharya and R. A. Klemm, "Broadband Noise in Orthorhombic TaS₃," Proceedings of the International Conference on Solids, Budapest, Hungary, September 3-7, 1984. Edited by Gy. Hutiray and J. Solyom (Lecture Notes in Physics, Springer-Verlag, New York, 1985), pp. 301-303.

11. R. A. Klemm, M. O. Robbins and J. R. Schrieffer, "The Single Domain Model of Charge-Density Wave Transport," Proceedings of the International Conference on Charge Density Waves in Solids, Budapest, Hungary, September 3-7, 1984. Edited by Gy. Hutiray and J. Solyom (Lecture Notes in Physics, Springer-Verlag, New York, 1985), pp. 178-187.

10. M. O. Robbins and R. A. Klemm, "Charge Density Wave Conduction of Small Samples," Proceedings of the International Conference on Synthetic Metals, Abano Terme, Italy, June 17-22, 1984, Molecular Crystals and Liquid Crystals **121**, 95-98 (1985).

9. M. O. Robbins, J. P. Stokes, S. Bhattacharya and R. A. Klemm, "Broadband Noise in Orthorhombic TaS₃," Proceedings of the International Conference on Synthetic Metals, Abano Terme, Italy, June 17-22, 1984, Molecular Crystals and Liquid Crystals **121**, 63-66 (1985).

[8. M. O. Robbins and L. M. Falicov, "Electronic Theory of Ordering and Segregation in Transition-Metal Alloys," Phys. Rev. **B29**, 1333-1348 \(1984\).](#)

[7. M. O. Robbins and B. Koiller, "Renormalization Group Methods for the Spectra of Disordered Chains," Phys. Rev. **B27**, 7703-7715 \(1983\).](#)

6. B. Koiller, M. O. Robbins, M. Davidovich and C. E. T. Gonçalves da Silva, "Renormalization Group Treatment for the Electronic Spectrum of Partially Ordered One-Dimensional Alloys," Solid State Commun. **45**, 955-959, (1983).

5. M. O. Robbins and L. M. Falicov, "Electronic Energy and Short-range Order in Binary Alloys," Materials Research Society Proceedings, Boston, Massachusetts, November 1-4, 1982. Edited by L. H. Bennett (Elsevier Science Publishing Company, Inc., New York, 1983), pp. 53-66.

4. L. M. Falicov and M. O. Robbins, "Theory of Ordering and Segregation in Binary Alloys: Application to Alkali and Noble Metals," Conference Proceedings of the NATO Advanced Study Institute on Excitations in Disordered Systems, East Lansing, Michigan, August 23-September 4, 1981. Edited by M. F. Thorpe (Plenum Press, New York, 1982), pp. 613-622.

[3. M. O. Robbins and L. M. Falicov, "Electronic Theory of Ordering and Segregation in Binary Alloys: Application to Simple Metals," Phys. Rev. **B25**, 2343-2357 \(1982\).](#)

2. M. O. Robbins and E. A. Marseglia, "X-ray Studies of the Charge-Density Wave Transitions in TaS₂," Phil. Mag. **B42**, 705-715 (1980).

1. A. Strominger, A. L. Sessoms, E. S. Sadowski, M. Robbins and L. Holcomb, "A Liquid Argon/Iron Hadron Calorimeter," IEE Trans. Nucl. Sci. **NS-25**, 354-357 (1978).