David J. Pine

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Education

Ph.D.	Physics	Cornell University	1982
M.S.	Physics	Cornell University	1979
B.S.	Physics and Mathematics	Wheaton College	1975

Employment History

New York University	Professor of Physics	2005-present
	Professor of Mathematics	2005-present
University of California, Santa Barbara	Chair, Dept. of Chemical Engineering	2001-2004
	Professor of Chemical Engineering	1995–2005
	Professor of Materials	1995–2005
Exxon Research & Engineering	Staff Physicist	1990–1995
Haverford College	Assistant Professor of Physics	1984–1989
University of Pittsburgh	Postdoctoral Research Associate	1982–1984

Other Appointments or Honors

Co-Editor, The European Physical Journal E (Soft Matter)	2007-present
Vice Chair, Division of Condensed Matter Physics, American Physical Society	2007-present
Adjunct Professor of Chemical Engineering, KAIST Korean Advanced Institute for Science & Technology, Daejeon, Korea	2001-present
Langmuir Lecturer, American Chemical Society, New York	2003
Professeur Invité, ESPCI École Supérieure de Physique et de Chimie Industrielles, Paris, France	2003
Society of Rheology Publication of the Year Award	2000
Fellow of the American Association for the Advancement of Science	2000
Guggenheim Fellow	1999–2000
Professeur Invité, ESPCI, Paris, France	1999–2000
Fellow of the American Physical Society	1997
Professeur Invité, University of Strasbourg, France	1997
Visiting Directeur de Recherche, University of Strasbourg, France	1994
Visiting Scientist, Exxon Research & Engineering	1987–1988

Research Interests

Research interests encompass the structural, rheological, and optical properties of complex fluids, including colloidal and noncolloidal particle suspensions, emulsions, surfactant solutions, and polymer solutions. Current projects include the development and study of colloidal clusters and colloids with non-spherically symmetric potentials, reversibility in non-colloidal particle suspensions, shear thickening in surfactant solutions, rheology and jamming of dense suspensions, block copolymer/nanoparticle interactions. There is also ongoing activity in the development of new optical probes of these materials, including diffusing-wave spectroscopy, light scattering microscopy, and light scattering from sheared fluids.

Publications

[1] D.J. Pine and R.M. Cotts. Diffusion and electrotransport of hydrogen and deuterium in vanadium-titanium and vanadium-chromium alloys. *Physical Review B*, 28(2):641–647, 1983.

[2] N. Easwar, J.V. Maher, D.J. Pine, and W.I. Goldburg. Active-coupling mixing times for a stirred binary liquid. *Physical Review Letters*, 51(14):1272–1274, 1983.

[3] D.J. Pine, N. Easwar, J.V. Maher, and W.I. Goldburg. Turbulent suppression of spinodal decomposition. *Physical Review A*, 29(1):308–313, 1984.

[4] D.J. Pine and R.M. Cotts. Accurate measurement of hydrogen diffusivity in metals. *Review of Scientific Instruments*, 55(4):614–616, 1984.

[5] D.J. Pine. Azimuthal integration of scattered light intensity using a conical lens. *Review of Scientific Instruments*, 55(6):856–859, 1984.

[6] D.J. Pine, D.A. Weitz, P.M. Chaikin, and E. Herbolzheimer. Diffusing-wave spectroscopy. *Physical Review Letters*, 60(12):1134–1137, 1988.

[7] D.J. Pine, D.A. Weitz, P.M. Chaikin, and E. Herbolzheimer. Features of diffusing-wave spectroscopy. In J. Abbiss and A. E. Smart, editors, *OSA Proceedings on Photon Correlation Techniques and Applications*, volume 1, pages 35–43. Optical Society of America, Washington, DC, 1988.

[8] Xia Qiu, H.D. Ou-Yang, D.J. Pine, and P.M. Chaikin. Self-diffusion of interacting colloids far from equilibrium. *Physical Review Letters*, 61(22):2554–2557, 1988.

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[10] F.C. MacKintosh, J.X. Zhu, D.J. Pine, and D.A. Weitz. Polarization memory of multiply scattered light. *Physical Review B-Condensed Matter*, 40(13):9342–9345, 1989.

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[14] D.A. Weitz, L. Ye, Ping Sheng, J.S. Huang, D.J. Pine, J. Liu, P.M. Chaikin, and P.M. Pusey. Dynamics of concentrated colloidal suspensions. In C.R. Safinya, S.A. Safran, and P.A. Pincus, editors, *Macromolecular Fluids*, volume 177 of *Mat. Res. Soc. Symp. Proc.*, pages 207–212. Materials Research Society, Pittsburgh, 1990.

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