

# Keng-hui Lin

Institute of Physics, Academia Sinica  
128 Sec. 2, Academia Road,  
Nankang, Taipei 115, Taiwan  
02-2789-6763  
[khlin@phys.sinica.edu.tw](mailto:khlin@phys.sinica.edu.tw)

## Education

**University of Pennsylvania**, Philadelphia, Pennsylvania 1996-2002  
PhD. In Physics (received in June 2002), Thesis advisor: Arjun G. Yodh  
Thesis: Entropically Driven Colloidal Crystallization and Interaction

**National Taiwan University**, Taipei, Taiwan 1991-1995  
Bachelor of Science in Physics

## Experiences

**Academia Sinica**, Taipei, Taiwan 2004-Present  
Assistant Research Fellow, Institute of Physics

**Harvard University**, Cambridge, Massachusetts 2004-2005  
Visiting Scholar, Dept. of Physics and Dana-Farber Cancer Institute

**Harvard University**, Cambridge, Massachusetts 2002-2004  
Postdoc Research Associate, Dept. of Chemistry and Chemical Biology

**Academia Sinica**, Taipei, Taiwan 1995-1996  
Research Assistant, Institute of Atomic and Molecular Sciences

## Awards and Honors

- Recipient of Eli Burstein Award(2002).
- Recipient of Robert E. Davis Travel award from AWIS-PHL(1999).
- Scholarship of National Gifted Student in Physical Sciences (1991-1995).
- Scholarship of Dr. C. C. Samuel Ting (1992-1995).
- Skipped last year in high school and entered NTU Physics with honor (1991).

## Publications

**Entropically Driven Colloidal Crystallization on Patterned Surfaces**  
Keng-hui Lin, John C. Crocker, Vikram Prasad, Andrew Schofield, D.A. Weitz, T.C. Lubensky and A.G. Yodh, *Phys. Rev. Lett.*, **85**, 1770 (2000)

**Colloidal Interaction in Suspensions of Rods**  
Keng-hui Lin, John C. Crocker, Ana C. Zeri, and A. G. Yodh, *Phys. Rev. Lett.*, **87**, 083001(2001).

**Entropically Driven Self-Assembly and Interaction in Suspension**  
A.G. Yodh, Keng-hui Lin, J. C. Crocker, A. D. Dinsmore, R. Verma, and P. D. Kaplan, *Phil. Trans. R. Soc. Lond. A*, **359**, 921 (2001).

**Electro-optic Response and Switchable Bragg Diffraction for Liquid Crystals in Colloid-Templated Materials**

P. Mach, P. Wiltzius, M. Megens, D.A. Weitz, Keng-hui Lin, T.C. Lubensky, and A.G. Yodh, *Phys. Rev. E*, **65**, 031720 (2002).

**Switchable Bragg Diffraction from Liquid Crystal in Colloid-Templated Structures**

P. Mach, P. Wiltzius, M. Megens, D.A. Weitz, Keng-hui Lin, T.C. Lubensky, and A.G. Yodh, *Europhys. Lett.* **58**, 679 (2002).

**Entropic interactions in suspensions of semiflexible rods: Short-range effects of flexibility**

A. W. C. Lau, Keng-hui Lin and A. G. Yodh, *Phys. Rev. E* **66**, 020401(R) (2002).

**Template-Directed Convective Assembly of 3D Face-Centered-Cubic Colloidal Crystals**

J. Zhang, A. Alsayed, Keng-hui Lin, S. Sanyal, F. Zhang, W-J. Pao, V. S. K. Balagurusamy, P. A. Heiney, and A. G. Yodh, *App. Phys. Lett.* **81**, 3176 (2002).

**Field-induced structures in miscible ferrofluid suspensions with and without latex spheres**

M.F. Islam, K-H. Lin, D. Lacoste, T.C. Lubensky, and A.G. Yodh *Phys. Rev. E*, **67**, 021402 (2003).

**High-performance nanowire electronics and photonics on glass and plastic substrates**

M.C. McAlpine, R.S. Friedman, S. Jin, K.H. Lin, W.U. Wang, C.M. Lieber, *Nanoletters*, **3**, 1531(2003).

**Label-free detection of small-molecule-protein interactions by using nanowire nanosensors**

Wayne U Wang, C. Chen, K.H. Lin, Y. Fang, C.M. Lieber, *PNAS* **102**, 3208 (2005).

**Invited Talks**

APS March Meeting, Seattle, WA	2001
Symposium on the Interface Between Biology and Materials Science, UPenn	2000
Symposium on the Physics of Soft Materials, UPenn	1999

**Research Activities**

U. of Pennsylvania, organizer of Soft Matter Talks	2002-2001
National Science Foundation, Force Transduction in Biology workshop	2000
Marine Biological Laboratory, Optical Microscopy workshop	2000
U. of Delaware, Colloidal and Interface Sciences workshop	1999
Materials Science Summer Institute, Complex Fluid Material program	1998

**References**

Prof. Arjun G. Yodh, yodh@dept.physics.upenn.edu  
Dept. of Physics and Astronomy, University of Pennsylvania, Philadelphia, PA 19104

Prof. David A. Weitz, weitz@deas.harvard.edu  
Dept. of Physics, Harvard University, Cambridge, MA 02138

Prof. John C. Crocker, jcrocker@seas.upenn.edu  
Dept. of Chemical Engineering, University of Pennsylvania, Philadelphia, PA 19104