ROBERT B. MEYER

CURRICULUM VITAE

Birthdate:	October 13, 1943	
Education:	1965 B.A.	(Physics) Harvard University
	1970 Ph.D.	(Applied Physics) Harvard University
Professional Record:	1969-70	Lecturer and Research Fellow, Harvard University
	1970-74	Assistant Professor, Harvard University
	1974-78	Associate Professor, Harvard University
	1977	Nordita Visiting Professor, Chalmers Institute of Technology, Göteborg, Sweden
	1978	Joliot Curie Professor, Ecole Superieure de Physique et de Chimie Industrielles de la Ville de Paris
	1978-85	Associate Professor, Brandeis University
	1985-	Professor, Brandeis University
Honors and Awards:	1971-75	Alfred P. Sloan Foundation Research Fellowship
	1978	Joliot Curie Medal of the City of Paris
	1985-1991	Editorial Board, Physical Review A
	1985-	Editorial Board, Molecular Crystals and Liquid Crystals
	1989	Special Recognition Award, Society for Information Display, for research on ferroelectric liquid crystals
	1991-	Editorial Board, World Scientific Publishers, Liquid Crystal Series
	1993	LVMH Science for Art Prize, Runner-up award
	2004	Benjamin Franklin Medal in Physics
	2006	Oliver Buckley Prize of the American Physical Society
	2007	G.W.Gray Medal of the British Liquid Crystal Society

RESEARCH ACTIVITIES

Professor Meyer is the current Director of the new NSF funded Materials Research Science and Engineering Center at Brandeis University, for the study of constraints and frustration in nano-structured and bio-molecular materials. His research has concerned various aspects of the physics and chemistry of liquid crystals, including fundamental studies of liquid crystal ordering in a variety of systems, electric and magnetic field effects, defect structures, phase changes, and the relationship between molecular structure and novel macroscopic properties such as flexoelectricity and ferroelectricity. Recently, his research has concentrated on liquid crystalline gels and elastomers, and textures and modulated phases in ferroelectric liquid crystals. His research has been supported by grants and contracts from the National Science foundation, the U.S. Army Research Office, the U.S. Department of Energy, and the Raytheon Corp. He has consulted with a number of companies on the development of liquid crystal materials and devices, and on patent related issues, and holds four patents:

US Patent #4,601,542 "Nematic Liquid Crystal Storage Display Device," July 22, 1986.
US Patent #4,601,543 "Nematic Liquid Crystal Storage Display Device" July 22, 1986.

(with Gary D. Boyd, Julian Cheng, and Robert N. Thurston),
US Patent #4,917,475 "Flexoelectric Liquid Crystal Device" April 17, 1990.
(with Jayantilal S. Patel),
US Patent #6,088,541 "Color-Balanced Glare Reduction System for Flash Cameras" July 11, 2000.

PUBLICATIONS

"Effects of Electric and Magnetic Fields on the Structure of Cholesteric Liquid Crystals," Appl. Phys. Lett. **12**, 281 (1968).

"Distortion of a Cholesteric Structure by a Magnetic Field," Appl. Phys. Lett. **14**, 208 (1969).

"Piezoelectric Effects in Liquid Crystals," Phys. Rev. Lett. **22**, 918 (1969).

"Raman Scattering from Nematic Liquid Crystals: A Determination of the Degree of Ordering" (with E.B. Priestly, P.S. Pershan and D.H. Dolphin). Vijnana Parishad Anusandhan Patrika **14**, 93 (1971).

"Point Disclinations at a Nematic-Isotropic Liquid Interface," Mol. Cryst. Liq. Cryst. **16**, 355 (1972).

"Effects of a Magnetic Field on the Optical Transmission in Cholesteric Liquid Crystals" (with S.C. Chou and L. Cheung), Solid State Commun. **11**, 977 (l972).

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"The Interaction between a Disclination in a Nematic Liquid Crystal and a Rubbed Surface," Solid State Commun. **12**, 585 (1973).

"On the Existence of Even Indexed Disclinations in Nematic Liquid Crystals," Philos. Mag. **27**, 405 (1973).

"Strain Induced Instability of Monodomain Smectic A and Cholesteric Liquid Crystals" (with N. Clark), Appl. Phys. Lett. **22**, 493 (1973).

"Measurements of Nematic Elastic Constants near a Second Order Nematic-Smectic A Phase Change" (with L. Cheung and H. Gruler), Phys. Rev. Lett. **31**, 349 (1973).

"Surface Polarity Induced Domains in Liquid Crystals" (with P.S. Pershan), Solid State Commun. **13**, 989 (1973).

"Optical Modeling of Electron Microscopy on Amorphous Tetrahedrally Coordinated Materials" (with F. Spaepen), J. Non-Cryst. Solids **13**, (1973/74).

"Pretransitional Optical Rotation in the Isotropic Phase of Cholesteric Liquid Crystals" (with J. Cheng), Phys. Rev. **A9**, 2744 (1974).

"Compression Induced Smectic A to Smectic C Phase Change in a Liquid Crystal" (with R. Ribotta and G. Durand), J. Phys. Lett. **35**, L-161 (1974).

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"Structural Problems in Liquid Crystal Physics," Les Houches Summer School in Theoretical Physics, 1973. *Molecular Fluids*, R. Balian and G. Weil (eds.) (Gordon and Breach, New York, 1976).

"The Surface Tension in a Structural Model for the Solid-Liquid Interface" (with F. Spaepen), Scripta Met. **10**, 257 (1976).

"Mean Field Theory of the Nematic-Smectic A Phase Change in Liquid Crystals" (with T.C. Lubensky), Phys. Rev. **A14**, 2307 (1976).

"Electroclinic Effect at the A-C Phase Changes in a Chiral Smectic Liquid Crystal" (with S. Garoff), Phys. Rev. Lett. **38**, 848 (1977).

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"Reply to 'Behavior of Electric Susceptibility and Electroclinic Coefficient Near the Chiral Smectic A-C* Transition'" (with Stephen Garoff), Phys. Rev. **A18**, 2739 (1978).

"Observation of Edge Dislocations in Smectic Liquid Crystals" (with B. Stebler and S.T. Lagerwall), Phys. Rev. Lett. **41**, 1393 (1978).

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