Mani L. Bhaumik

Curriculum Vitae

Personal Information

Date of Birth: March 30, 1931
Place of Birth: A primitive village, South of Calcutta, India

Became U.S. Citizen in 1968

Education

B. Sc. (Honors), Physics (University of Calcutta)	1951
M. Sc., Physics (University of Calcutta)	1953
Mentor: S.N. Bose (of Bose-Einstein fame)	
Ph. D., Physics (Indian Institute of Technology)	1958

Professional History

Lecturer in Physics, Indian Institute of Technology, Kharagpore	1958-59
Sloan Foundation Fellow, University of California, Los Angeles	1959-61
Senior Staff Scientist, Quantum Physics Division, Xerox Electro-Optical Systems, Pasadena, CA	1961-63
Head of Chemical Physics Division, Xerox Electro-Optical Systems, Pasadena, CA	1963-65
Research Scientist, Bose Institute, Calcutta, India	1966
Laser Scientist, Aerojet General, Azusa, CA	1967
Lecturer, Astronomy and Quantum Physics, California State University, Long Beach	1967-68
Laser Scientist, Northrop Corporate Research Center, Hawthorne, CA	1968-72
Director, Laser Technology Lab, Northrop Corporation	1973-85
Exchange Scientist to Romania, Sponsored by U.S. Department of State	1974
Lecturer, Summer School on High-Power Gas Lasers, Capri, Italy	1975
Lecturer, International Symposium on Gas-Flow and Chemical Lasers, Belgium	1978

Lecturer, International Symposium on Gas Discharge Lasers,
Grenoble, France 1979
President, Cosmogenics, Inc., Non-Profit Educational Foundation,
Los Angeles, California 1986 –
Managing Trustee, Moni Bhaumik Educational Foundation,
Calcutta, India 1998 –
President, Cosmotoons, Inc., Los Angeles, CA 2000 –

Professional Memberships

Life Member, American Physical Society
Member, Scientific Society of Sigma Xi
Member, Optical Society of America
Senior Member, Institute of Electrical and Electronics Engineering
Member, Cosmos Club, Washington, DC
Member, World Affaires Council, Los Angeles
Member, Advisory Board of Indian American Heritage Foundation, Los Angeles
Founding Director, Friends of the Kolkata Museum of Modern Arts

Honors and Awards (partial list)

Elected Fellow of the American Physical Society (APS) 1976
Elected Fellow of the Institute of Electrical
and Electronics Engineers (IEEE) 1982
Featured in TV Serial "Life Style of the Rich and Famous" 1989
Received Honorary D.Sc. for Lifetime Academic Achievements
From Indian Institute of Technology 1995
Delivered Asoke Sarkar Memorial Lecture,
Calcutta International Book Fair 2001
Lifetime Achievement Award,
North American Bengali Association 2003
Honored by the Cultural Association of Bengal for
Philanthropic Services to Community 2005
Mahatma Gandhi Humanitarian Award from Indian American
Heritage Foundation presented by Sir Ben Kingsley 2005
Award for Outstanding Achievement in Science and Philanthropic
Contribution by Asian Heritage Committee, New York 2006
Elected Fellow of the Asiatic Society, Calcutta, India 2006
Listed in Who's Who in America
Listed in American Men and Women in Science
International Science Award named for Mani Bhaumik
at the University of California, Los Angeles 2006

Appearances in Radio and Television

(On topics related to Science and Spirituality)

1. Voice of America	May 25, 2005
2. PBS Syndicated TV program "Between The Lines"	June 17
3. Syndicated Cable Program "Bridging Heaven and Earth"	Sept 15
4. Jim Engster Show, New Orleans, Louisiana	May 13
5. "Wake up America", Palm Springs, California	May 14
6. Joey English Show, Palm Springs, California	May 19
7. "Journey Home", KSFR, Santa Fe, New Mexico	July 11& 19
8. "The Aware Show", KPFK, Los Angeles	August 4
	November 10

Speeches (partial list)

Keynote Speech at Indian American Heritage Foundation, Los Angeles, CA	May 1, 2005
Roundtable West, Newport Beach, CA	May 12
Morgan Stanley, Santa Monica, CA	May 24
Roundtable West, Beverly Hills, CA	May 26
Act for MS, Palm Springs, CA	Feb 13, 2006
University of California, Los Angeles	Mar 16
Institute of Culture, Calcutta, India	Apr 29
Keynote Speech, Asian Heritage Celebration, New York, NY	May 19

DR. MANI L. BHAUMIK

Publications (partial list)

- "Electric Discharge Pumping of Excimer Lasers" with W. H. Long Jr. "Journal de Physique" 40 07 (July 1979).
- "Efficient E-Beam Excitation of XeCl," with D. E. Rothe and J. B. West, IEEE J. Quant. Electron. QE-15, 5 (May 1979).
- "Ultraviolet and Visible Lasers," Proceedings of the Second International Symposium on Gas-Flow and Chemical Lasers, Rhode St. Genese, Belgium, September 1978.
- "High Efficiency Discharge Excitation of the KrF Laser, " with R. S. Bradford, Jr., W. B. Lacina, and E. R. Ault, Opt. Commun. 18, 210 (July 1976).
- "Kinectic Studies of the Krypton Fluoride Laser, with W. B. Lacina, R. S. Bradford, Jr., and E. R. Ault, Opt. Commun. 18, 116 (July 1976).
- "High Efficiency UV Lasers," Laser Focus, p. 54, February 1976.
- "High Efficiency Electric Discharge CO Lasers," Proceedings of the Summer School, International College of Applied Physics, Capri, Italy, September 1975. Published in Conference Series No. 29, The Institute of Physics, Bristol and London (1976).
- "New Approaches to High Power UV Visible Laser," Proceedings of the Summer School, International College of Applied Physics, Capri, Italy, September 1975. Published in Conference Series No. 29, The Institute of Physics, Bristol and London (1976).
- "High Efficiency KrF Excimer Laser, " with R. S. Bradford, Jr., and E. R. Ault, Appl. Phys. Lett. 28, 23 (1976).
- "A High Power I_2 Laser in the 342 nm Band System, " with R. S. Bradford, Jr., and E. R. Ault, Appl. Phys. Lett. 27, 546 (1975).

- "High Power Xenon Fluoride Laser," with E. R. Ault and R. S. Bradford, Jr., Appl. Phys. Lett. 27, 413 (1975).
- "High Power Ar-N_2Transfer Laser at 3577 A," with E. R. Ault and N. T. Olson, IEEE J. Quant. Electron. 10, 624 (1974).
- "Molecular Association Lasers," Proceedings SPIE 41, 205 (1973).
- "High Power Ultraviolet Laser Radiation from Molecular Xenon," with W. M. Hughes, J. Shannon, A. Kolb, and E. R. Ault, Appl. Phys. Lett. 23, 385 (1973).
- "Xenon Molecular Laser in the Vacuum Ultraviolet," with E. R. Ault, W. M. Hughes, R. J. Jensen, C. P. Robinson, A. C. Kolb, and J. Shannon, IEEE J. Quant. Electron, 9, 1031 (1973).
- "CO Laser Line Selection Technique, " Appl. Phys. Lett. 17, 188 (1972).
- "High Pressure Electrically Excited CO Laser," with M. M. Mann and W. B. Lacina, IEEE J. Quant. Electron. QE-8, 617 (1972).
- "High Power CO Laser," with M. M. Mann, W. B. Lacina, and G. Hasserjian, Proceedings of the Fifth DoD Conferrence on Laser Technology, U. S. Naval Postgraduate School, Monterey, California, April 1972.
- "Characteristics of a Room Temperature CO Laser," with W. B. Lacina and M. M. Mann, IEEE J. Quant. Electron. QE-8, 150 (1972).
- " CO_2 Laser Frequency Doubling Using a Tellurium Reflector," with W. B. Lacina, R. G. Eguchi, and M. M. Mann, Appl. Opt. 10, 221 (1971).
- "Mode Locking of the CO_2 Laser by Intracavity Phase Modulation," with M. M. Mann, R. G. Eguchi, W. B. Lacina, and W. H. Steier, Appl. Phys. Lett. 17 393 (1970).

- "Spectral Coincidence Between Emission Lines of the CO Laser and Absorption Lines of Nitrogen Oxides," with R. T. Menzies and Nicholas George, IEEE J. Quant. Electron. QE-6, 800 (1970).
- "High Efficiency CO Laser at Room Temperature," Appl. Phys. Lett. 17, 188 (1970).
- "Enhancement of CO Laser Efficiency by Addition of Xenon," with W. B. Lacina, and M. M. Mann, IEEE J. Quant. Electron. QE-6, 575 (1970).
- "Room Temperature CO Laser," with M. M. Mann and W. B. Lacina, Appl. Phys. Lett. 16, 430 (1970).
- "Techniques for Measurement of Fluorescence Decay Times in Liquids and Solids," Laser Parameter Measurements Handbook, editor H. G. Heard, Wiley, 1968.
- "Physics of Raman Lasers," Am. J. Phys. 35, 330 (1967).
- "The Versatile Laser and Its Applications," Science and Culture (India) 32, 10 483 (1966).
- "Time Resolved Spectroscopy of Europium Chelates," with L. J. Nugent, J. Chem. Phys. 43, 168 (1965).
- "Stroboscopic Time-Resolved Spectroscopy," with J. Snell, G. L. Clark, and L. Ferder, Rev. Sci Instr. 36, 37 (1965).
- "Studies on Inter-Intra Molecular Energy Transfer," with M. A. El -Sayed, J. Phys. Chem. 69, 275 (1965).
- "Exchanges of Rare-Earth Ions in Chelate Solutions, "J. Inorg. and Nucli. Chem. 27, 243 (1965).
- "The Origin of Molecular Phosphorescence in Some Rare-Earth Chelates," with L. Ferber, and M. W. El-Sayed, J. Chem. Phys. 42, 1843 (1965).
- "Rare Earth Chelate Vapor," J. Inorg, and Nucli. Chem. 27, 261 (1965).

Mani L. Bhaumik

Partial List of Patents

CW Scalable Donor-Acceptor Gas Transfer Laser

US Patent number: 4225831 Issued: Sept. 30, 1980

Laser Multiline Selection Method and Means

US Patent number: 4068195 Issued: Jan .10, 1978

Xenon Fluoride Laser Utilizing Nitrogen Trifluoride as a Fluorine Donor

US Patent number: 4063191 Issued: Dec. 13, 1977

Krypton Fluoride Excimer Laser Utilizing Nitrogen Trifluoride as a Fluorine Donor

US Patent number: 4063192 Issued: Dec. 13, 1977

High-Power Argon/Nitrogen Transfer Laser

US Patent number: 3970964 Issued: July 20, 1976

Room Temperature CO Laser

US Patent number: 3761838 Issued: Sept. 25, 1973

The Use of Mercury in a Carbon Monoxide Laser

US Patent number: 3643175 Issued: Feb 15, 1973

Mani L. Bhaumik

Biographical Note

Dr. Mani L. Bhaumik is a laser physicist who announced the conclusive demonstration of the world's first efficient excimer laser at the Denver, Colorado meeting of the American Optical Society in May 1973. This is the class of laser that would eventually eliminate glasses or contact lenses in many cases requiring vision correction. The procedure, known as corneal sculpting, takes less than a minute and has helped fifteen million people world wide.

Dr. Bhaumik was born in a primitive Indian village. His humble childhood included taking the family cows to the pasture and sleeping on rags in a thatched roof mud hut. During the Bengal famine of 1943, his grandmother died of malnutrition by giving her portion of the food to him. That ultimate sacrifice for love left a very deep and lasting impression and made him determined to climb out of the black hole of poverty.

Education seemed to be the only way to get started on this struggle. So, he walked barefoot to the nearest school four miles away. He did not have a pair of shoes until he was sixteen. He was born in the vortex of the struggle for Indian independence and as an impressionable teen-ager had the opportunity to live with Mahatma Gandhi in his camp. But life was a great struggle not knowing where his next meal would come from. He kept his focus, however, and with a determination never to give up, he survived oppression, famine, and epidemic to earn a Ph. D.

With the people from his village raising money for his air fare, he came to Los Angeles with just three dollars in his pocket. From then on, the immense struggle finally began to pay off. His phenomenal success was featured in the *Lifestyles of the Rich and Famous*. He published his studies in the International Bestseller, *Code Name God*, and is devoting most of his time to bring this message to the public through lectures, article, and appearances in the broadcast media.

Dr. Bhaumik personally experienced the importance of faith in action from the

supreme sacrifice of his grand mother, observing Mother Teresa's compassionate care of the poorest of the poor in Calcutta, and from watching the living example of Gandhi in his camp. He is practicing his belief in faith in action through his extensive charitable and community activities.

Dr. Bhaumik strongly believes that education is the touchstone for a radical change. After all, it was education that helped him escape out of the black hole of poverty. So he continues to help various educational institutions in India and abroad. He has contributed to all the schools and colleges he attended by funding scholarships, recognizing excellence, and financing construction of new facilities. A modern auditorium at his Alma Mater Scottish Church College bears his name.

The most recognized of his philanthropic activities is the Educational Foundation he has set up in Calcutta. The foundation currently provides full financial support to eighty one very brilliant but underprivileged students from rural Bengal for pursuing their university education in science, engineering and medicine. These activities have made Dr. Bhaumik a beloved man in his native land. A biography entitled *Mani the Jewel* has been a consistent bestseller there.

Dr. Bhaumik has been involved in numerous community activities through his association with the Los Angeles Bombay Sister City Association; the Los Angeles St. Petersburg Sister City association; the Long Beach Calcutta sister City Association and others. He has donated to various charitable organizations including the Thalians of Los Angeles and the Israel Cancer Research Fund. Dr. Bhaumik is also the creator of an animated television series currently being produced to spark children's interest in science through entertainment.