

# Moshe Shapiro

## Employment History

- 2002 -** Canada Research Chair Professor, University of British Columbia  
**1993-2002** Jacques Mimran Professor of Chemical Physics, The Weizmann Institute  
**1983-1987** Chairman of the Department of Chemical Physics, The Weizmann Institute  
**1983-2002** Professor, The Weizmann Institute  
**1978-1983** Associate Professor, The Weizmann Institute  
**1972-1978** Staff Scientist and Senior Scientist, The Weizmann Institute  
**1970-1972** Post Doctoral Fellow, Department of Chemistry, Harvard University

## Honors and Awards:

- 1985** - The M. Landau Prize. **1995** - The Lisa Meitner Alexander von Humboldt Research Award. **1997** - The Kolthoff Prize, awarded by The Technion, Haifa. **1999** - The Weizmann Prize, awarded by The City of Tel Aviv. **2001** - The Israel Chemical Society Award. **2004** - Fellow of the American Physical Society. **2004** - Fellow of the UK Institute of Physics.

## 10 Selected Publications

- [1] M. Shapiro, "Dynamics of Dissociation I: Computational Investigation of Unimolecular Break-down Processes", J. Chem. Phys. **56**, 2582 (1972).  
[2] R.B. Gerber, M. Shapiro, U. Buck, and J. Schleusener, "Quantum Mechanical Inversion of the Differential Cross-Section: Determination of the He-Ne Potential", Phys. Rev. Lett. **41**, 236 (1978).  
[3] M. Shapiro and H. Kaplan, "On the Theory of H+OH( $^2\Pi$ ) Collisions and Interstellar OH Maser Action", J. Chem. Phys. **71**, 2182 (1979).  
[4] E. Segev and M. Shapiro, "Three-Dimensional Quantum Dynamics of H<sub>2</sub>O and HOD Photodissociation", J. Chem. Phys. **77**, 5601 (1982).  
[5] P. Brumer and M. Shapiro, "Control of Unimolecular Reactions Using Coherent Light". Chem. Phys. Lett. **126**, 541 (1986).  
[6] A. Shnitman, I. Sofer, I. Golub, A. Yogev, M. Shapiro, Z. Chen and P. Brumer, "Experimental observation of laser control: The Na<sub>2</sub> → Na+Na(3d),Na(3p) branching photodissociation reaction", Phys. Rev. Lett. **76**, 2886 (1996).  
[7] C. Leichtle, W.P. Schleich, I.Sh. Averbukh, and M. Shapiro, "Quantum State Holography", Phys. Rev. Lett. **80**, 1418, (1998).  
[8] M. Shapiro, E. Frishman, and P. Brumer, "Coherently Controlled Asymmetric Synthesis with Achiral Light" Phys. Rev. Lett. **84**, 1669 (2000).  
[9] E. Frishman and M. Shapiro "Complete Suppression of Spontaneous Decay of a Manifold by Infrequent Interruptions" Phys. Rev. Lett. **87**, 253001 (2001).  
[10] M. Shapiro and P. Brumer *Principles of the Quantum Control of Molecular Processes* (John Wiley & Sons, New York, 2003)

## Competitive Grant Funding for the last 5 years

- [1] Coherence and control in atoms and molecules \$US26,140 p.a., European Union Increased Human Potential Program 2000-2003  
[2] "Coherent Radiative Control" with P. Brumer, US Navy Office of Naval Research \$US35,500 p.a. 1999-2004  
[3] "Quantum State Preparation" with K. Bergmann, \$US28,000 p.a. German-Israeli Foundation, 2001-2003.  
[4] "Coherent Control of Symmetry Breaking...", NSERC Canada discovery grant \$CAD73,000 p.a. 2004-2008