

**George C. Schatz**  
**List of Publications**

Books

1. **Quantum Mechanics in Chemistry**, G. C. Schatz and M. A. Ratner, Prentice Hall, Englewood Cliffs, NJ, 1993, xix+325 pages; republished by Dover, 2002 with additions and corrections. ISBN 0-486-42003-5.
2. **Introduction to Quantum Mechanics in Chemistry**, M. A. Ratner and G. C. Schatz, Prentice Hall, Upper Saddle River, NJ, 2001, x+296 pages. ISBN 0-13-895491-7
3. **Highly Excited Molecules: Relaxation, Reaction and Structure**, A. S. Mullin and G. C. Schatz,
4. **Frontiers of Plasmon Enhanced Spectroscopy**, Volume 1 and Volume 2, Y. Ozaki, G. C. Schatz, D. Graham and T. Itoh, ACS Symposium Series Vols. 1245 and 1246, American Chemical Society, Washington, D. C., 210 and 271 pp (2016) ISBN13: 9780841232013, ISBN13: 9780841232037

Patent Applications and Patents:

Nanoparticulate Nanosensors, NU application 22078/23008/25033, filed May 2005 based on provisional patents 10/784,129 filed Feb. 20, 2004 and 60/448,592 filed Feb. 20, 2003.

Immobilized Nano Rod Assembly (INRA): Multi-scale Fabrication Technique for Plasmonic Substrates, NU application 2012-143, filed Oct. 26, 2012

Broadband plasmonic absorber with hotspot generating gapped nanoantennas, NU application 2012-136, filed Nov. 5, 2012. Provisional application serial number 61/722,319.

Compositions, devices and methods for SERS and LSPR, Van Duyne, Richard P.; Zhang, Xiaoyu; Zhao, Jing; Whitney, Alyson V.; Elam, Jeffrey W.; Schatz, George C.; Stair, Peter C.; Zou, Shengli; Young, Matthew; Lyandres, Olga, Patent No. US 8,628,727 B2, dated Jan. 14, 2014

Conical pore ion pump for desalination, Yu Zhang and George C. Schatz, NU application NU2017-086, filed May 5, 2017

Photonic crystals comprising nanoparticles and spacer groups, NU application 2017-130, ChadA. Mirkin, Lin Sun, Haisin Lin, George C. Schatz, filed July 14, 2017. PCT Int. Appl. (2019), Patent No. WO 2019152594 A11 20190808 US 2018-62624328

Papers in Journals

1. Electron Paramagnetic Resonance of Magnetically Dilute Cupric ( $3d^9$ ,  $^2D$ ) Ion in Single Crystals of Zinc 3-Pyridine Sulfonate, G.C. Schatz and J.A. McMillan, *J. Chem. Phys.*, **55**, 2343-6 (1971).  
Doi: 10.1063/1.1676413
2. Chemiluminescence Excited by Atomic Fluorine, G.Schatz and M. Kaufman, *J. Phys. Chem.*, **76**, 3586-90 (1972).  
Doi: 10.1021/j100668a015

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Doi: 10.1016/0009-2614(73)87052-6
4. Large Quantum Effects in the Collinear  $F + H_2 \rightarrow FH + H$  Reaction, G.C. Schatz, J.M. Bowman and Aron Kuppermann, *J. Chem. Phys.*, **58**, 4023-5 (1973).  
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5. Role of Direct and Resonant (Compound State) Processes and of Their Interferences in the Quantum Dynamics of the collinear  $H + H_2$  Exchange Reaction, G.C. Schatz and A. Kuppermann, *J. Chem. Phys.*, **59**, 964-5 (1973).  
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6. Violation of Microscopic Reversibility and the Use of Reverse Quasi-Classical Trajectories for Calculating Reaction Cross Sections, J.M. Bowman, G.C. Schatz and A. Kuppermann, *Chem. Phys. Lett.*, **24**, 378-80 (1974).  
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8. Quantum Mechanical Reactive Scattering: An Accurate Three-Dimensional Calculation, Aron Kuppermann and G.C. Schatz, *J. Chem. Phys.*, **62**, 2502-4 (1975).  
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11. Dynamical Resonances in Collinear, Coplanar and Three Dimensional Quantum Mechanical Reactive Scattering, G.C. Schatz and Aron Kupperman, *Phys. Rev. Lett.*, **35**, 1266-9 (1975).  
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12. The Quantum Dynamics of Atom Plus Diatom Chemical Reactions, G.C. Schatz, Ph.D. Thesis, California Institute of Technology, 1975.  
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13. Quantum Mechanical Reactive Scattering for Planar Atom plus Diatom Systems: I. Theory, Aron Kuppermann, G.C. Schatz and M. Baer, *J. Chem. Phys.*, **65**, 4596-4623 (1976).  
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