

## **RALPH G. NUZZO**

William H. & Janet G. Lycan Professor of Chemistry  
Professor of Materials Science and Engineering  
University of Illinois at Urbana-Champaign

### **CURRENT ADDRESS:**

Department of Chemistry  
University of Illinois at Urbana-Champaign  
600 South Mathews Avenue  
Urbana, Illinois 61801

217-244-0809  
217-244-2278 (FAX)  
r-nuzzo@uiuc.edu

### **PERSONAL/EDUCATIONAL BACKGROUND:**

United States Citizen  
Born February 23, 1954 in Paterson, New Jersey  
A.B. with high honors and highest distinction in Chemistry  
Phi Beta Kappa, Henry Rutgers Scholar, Merck Award in Chemistry  
Rutgers College, New Brunswick, NJ, 1976  
Ph.D. in Organic Chemistry  
Massachusetts Institute of Technology, Cambridge, MA, 1980; G. M. Whitesides, Advisor

### **POSITIONS HELD:**

- Technical Staff in Materials Research, A.T.&T. Bell Laboratories, 1980-1987.
- Distinguished Member of the Technical Staff in Research, A.T.&T. Bell Laboratories, 1987-1991.
- Professor of Chemistry, University of Illinois at Urbana-Champaign, 1991-present.
- Professor of Materials Science and Engineering, University of Illinois at Urbana-Champaign, 1991-present.
- Alumni Research Scholar, Department of Chemistry, 2000-2001.
- Director, Frederick Seitz Materials Research Laboratory, 2002-2006 (Jan.).
- William H. & Janet G. Lycan Professor of Chemistry, 2001-present.

### **HONORS:**

- 2006 Wall Street Journal Technology Innovation Award for "the development of a process for making large-scale, high-performance electronic circuits that can be applied to any surface."
- Fellow, American Academy of Arts and Sciences, 2005.
- Fellow, World Innovation Foundation, 2004.
- Recipient of the American Chemical Society's Arthur W. Adamson Award for Distinguished Achievement in the Advancement of Surface Chemistry, 2003.
- Essential Science Indicators recognition of citations of a recently published paper in the field of Materials Science, 2007.
- Essential Science Indicators recognition of citations of a recently published paper in the field of chemistry, 2006.
- Selected for recognition in 2003, in honor of the Journal of the American Chemical Society's 125th anniversary, as an author of one of the twelve top-ranking papers published in the journal.
- ISI Essential Science Indicators selection in recognition of citations in molecular self-assembly, 2002.
- Named William H. & Janet G. Lycan Professor of Chemistry, University of Illinois at Urbana-Champaign, 2001.

- Named Alumni Research Scholar, Department of Chemistry, University of Illinois at Urbana-Champaign, 2000.
- Senior Editor, Langmuir, 1996-present.
- Special Creativity Extension, National Science Foundation, 1999-2001.
- Named Distinguished Member of the Technical Staff in Research, A.T.&T. Bell Laboratories, 1987.

**PROFESSIONAL ACTIVITIES DURING UNIVERSITY SERVICE (1991-present):**

National Research Council, Panel on Biomolecular Materials, 1991-1995.  
 Chair, DOE/NREL Study Panel on Surface and Interface Engineering, Subcommittee on Solar and Photovoltaic Materials, 1991-1992.  
 Consultant, Mayer, Brown, and Platt, 1991-1994.  
 NSF Site Review Committee, University of Minnesota ERC on Interfacial Engineering, 1991-1993.  
 NIH Site Review Committee, University of Washington, 1991.  
 Co-Organizer and Co-Chair, A.C.S. Polymer Surfaces Workshop, 1992.  
 Consultant, Inland Steel, 1992-1994.  
 Editorial Advisory Board, Langmuir, 1993-1995.  
 Visiting Committee, University of Massachusetts MRSEC, 1993-1994.  
 Consultant, The Gillette Company, 1993-2000.  
 Consultant, The General Electric Corporation, 1996-1998.  
 Consultant, Proctor and Gamble, 1993-95.  
 Consultant to Duracell Corporation, 1998-1999.  
 Consultant to Bioarray Solutions, 1996-1999.  
 Associate Editor, Langmuir, 1995-1998.  
 Senior Editor, Langmuir, 1999-present.  
 Contributing Editor, Current Opinion in Colloid and Interface Science, 1996-1997.  
 National Research Council, National Materials Advisory Board Panel on Microgravity Research, 1997.  
 National Research Council, National Materials Advisory Board Panel on Structural Materials for Airforce Airframes, Spaceframes, and Engine Systems in the 21st Century, 1997-1998.  
 Visiting Committee, University of Massachusetts MRSEC, 1997-present.  
 American Chemical Society National Awards Canvassing Committee, 1998-2000.  
 Scientific Advisory Board, Los Alamos National Laboratory, Institute on Complex Adaptive Matter, 1998-present.  
 Board of Trustees, Los Alamos National Laboratory, Institute on Complex Adaptive Matter, 1998-present.  
 National Science Foundation Career Award Evaluation Panelist, 1998.  
 National Science Foundation Career Award Evaluation Panelist, 1999.  
 Member of the Scientific Advisory Board, Surface Logix, 1999-present.  
 DOE Study Panel on Macromolecules at Surfaces and Interfaces, Santa Fe, NM, 2001.  
 Committee Member, NSF Study Panel on Solid State and Materials Chemistry, 2001.  
 American Chemical Society National Awards Committee, Chair Surface and Colloid Canvassing Committee, 2000-2001.  
 Science Advisory Board, NSF Engineering Research Center for Particle Science and Technology at the University of Florida, 2001-2003.  
 Los Alamos National Laboratory, Member MS&T Division External Review Committee, 2001-present.  
 Director's Materials Sciences Division Review Committee, Lawrence Berkeley National Laboratory, Berkeley, CA 2001-2002.  
 Member of the Scientific Advisory Board, EM Logix, 2002.  
 National Academy of Sciences Workshop on Materials Manufacturing, 2001, Washington DC.  
 National Science Foundation, MPS-DMR External Committee of Visitors, Chair Base Science Evaluation Cluster, 2002.  
 American Chemical Society, Member of the National Awards Committee, 2003-2006.  
 Royal Society of Chemistry/EPSRC, Member of Evaluation Panel on Chemistry Research in the UK, 2002-2003.  
 Defense Sciences Research Council (advisory committee to DARPA), invited participant, 2002.  
 Lawrence Livermore National Laboratory, Member Chemistry and Materials Science Division Review Committee, 2003-present.  
 National Research Council, Board on Chemical Sciences and Technology, Explosives Detection Task Committee, 2003-2004.  
 National Science Foundation, Chair, CHE-Division Workshop on Centers and Chemistry Research, 2003.

American Chemical Society, Member of the Advisory Board of the Petroleum Research Fund, 2003-present.  
Consultant, ExxonMobil Corporation, 2003-2005.  
Advisor to the Director and Board, The Camille and Henry Dreyfus Foundation, 2004 to present.  
National Science Foundation, Evaluation Panel, Chemistry Division CBC Program, 2004.  
Materials Sciences Division Review Committee, Lawrence Berkeley National Laboratory, 2004-2005.  
Scientific Advisory Board of Intermolecular Inc., 2004 to present.  
Cofounder of Semprius (formally pSi-Tech) Corporation, Board of Directors and Scientific Advisory Board, 2004 to present.  
Advisory Board, Masters Capital Nanotechnology LLC, 2004-present.  
Department of Energy, Member of the Council on Chemical Sciences, 2005-present.  
National Research Council, Review of the NSF MRSEC Program, 2005-2006.  
Editorial Advisory Board, Biointerphases (AVS Journal of Biomaterials), 2005-present.  
Scientific Advisory Board, IMRE: Agency for Science, Technology and Research, Singapore, 2005-present.  
External Review Board, Battelle Northwest Laboratory, 2006-present

#### **UNIVERSITY SERVICE ACTIVITIES (1991-present):**

Chair, Materials Science and Engineering Graduate Recruiting Committee (1991-1993).  
University of Illinois Faculty Senate (1992-1994).  
University Senate Committee on Service and Continuing Education (1992-1993).  
Executive Committee of the College of Engineering (1993-1995).  
Chancellor's Advisory Panel on the University in the Year 2001 and Beyond; Service Mission of the University Work Group (1993-1995).  
Department of Chemistry Head Search Committee (1994).  
Department of Chemistry Graduate Fellowship Committee (1995-2000).  
Department of Chemistry Staff Committee (1995-1998, 2006-present).  
Chair, Department of Chemistry Graduate Fellowship Committee (1996-2000).  
University of Illinois Faculty Senate (1997-1999).  
Advisory Committee of the University of Illinois Materials Research Laboratory (1997-2000).  
Advisory Committee to the Dean of the College of Engineering on the Evaluation of Laboratory Directors (1997).  
Chair, Department of Chemistry Materials Chemistry Program (1997-1998).  
University Counselor on Academic Expectations for Parents of Enrolling Freshman (1998).  
College of Engineering, Materials Research Laboratory Director Search Committee (1999).  
Department of Chemistry Graduate Recruiting Committee (1999-2000).  
University of Illinois Faculty Senate (2000-2002).  
Department of Chemistry Staff Committee (2000-2002).  
Chair, Department of Chemistry Senior Advisory Committee (2001-2002).  
Nanoscale Materials Cluster Leader, Seitz Materials Research Laboratory (2000-2002).  
Associate Director for Research, UIUC Center for Nano Sciences and Technology (2001-2002).  
Department of Chemistry, Budget and Operations Committee (2002-2003).  
Department of Materials Science and Engineering Head Search Committee (2003).  
Chair, Head Search Committee, Department of Bioengineering, 2005.  
Director, Frederick Seitz Materials Research Laboratory, 2002-2006 (Jan).  
Director, Center for Microanalysis of Materials (a DOE User Facility), 2002-2006 (Jan).

#### **Other Service:**

Adjunct Faculty Examiner, Linkoping University, Linkoping, Sweden, 1996.  
Adjunct Faculty Examiner, Universiteit Twente, Enschede, The Netherlands, 1998.  
External Review Committee, Miami University of Ohio, Oxford Ohio, 2006.

#### **U.S. Patents:**

- (1) "Modification of the Properties of Metal Surfaces and Interfaces," Allara, D.L.; Nuzzo, R.G., US 4690715 (09/01/1987)
- (2) "High Surface Area, Supported, Intermetallic Compounds," Dubois, L.H.; Nuzzo, R.G., US 4,507,401 (10/01/1984)

- (3) "High Surface Area, Supported, Intermetallic Compounds," Dubois, L.H.; Nuzzo, R.G., US 4,612,407 (09/16/1986)
- (4) "An Improved Process for the Chemical Vapor Deposition of Aluminum," Green, M.L.; Levy, R.; Nuzzo, R.G.; US 4,716,050 (12/29/1987)
- (5) "Passivation of Metal Surfaces," Dubois, L.H.; Nuzzo, R.G.; US 4,579,752 (04/01/1986)
- (6) "Self-Assembled Monolayers Directed Patterning of Surfaces," Nuzzo, R. G.; Jeon, N. L.; Clem, P. G.; Payne, D. A.; Xia, Y.; Mrksich, M.; Whitesides, G. M. U.S. 6,518,168 (02/11/2003).
- (7) "Decal Transfer Microfabrication," Nuzzo, R. G.; Childs, W. R. US 6,805,809 (10/19/2004).
- (8) "Decal Transfer Microfabrication," Divisional Application, Nuzzo, R. G.; Childs, W. R. filed 08/28/2003.
- (9) "Microfluidic Electrochemical Reactors," Nuzzo, R. G.; Mitrovski, S. M. filed 03/08/2004.
- (10) "Methods and Devices for Fabricating and Assembling Printable Semiconductors," Rogers, J.; Nuzzo, R. G.; Menard, E.; Lee, K.-J.; Khang, D.-Y.; Sun, Y. filed 06/04/2004
- (11) "Decal Transfer Lithography," Nuzzo, R. G.; Childs, W. R. filed 10/14/2004.
- (12) "Sub-Micron Decal Transfer Lithography," Shim, A.; Ahn, H; Nuzzo, R. G. (application with Dow Corning Corp), US 2005-679558P, filed 05/01/2005.
- (13) "Methods for Transfer and Assembly of Printable Semiconductor Elements," Nuzzo, R. G.; Rogers, J. A.; Menard, E.; Lee, K. J.; Khang, D.-Y.; Sun, Y.; Meitl, M.; Zhu, Z. filed on 04/07/2006.
- (14) "Printable Semiconductor Structures and Related Methods of Making and Assembling; Nuzzo, R. G.; Rogers, J. A.; Menard, E.; Lee, K. J.; Khang, D.-Y.; Sun, Y.; Meitl, M.; Zhu, Z.; Ko, H. C. Filed 06/01/2006.
- (15) "Pattern Transfer Printing by Kinetic Control of Adhesion to an Elastomeric Stamp," Nuzzo, R. G.; Rogers, J. A.; Menard, E.; Lee, K. J.; Khang, D.-Y.; Sun, Y.; Meitl, M.; Zhu, Z. filed on 06/09/2006.
- (16) "Multispectral Plasmonic Crystal Sensors," Nuzzo, R. G.; Rogers, J. A.; Mack, N. H.; Stewart, M.; Malyarchuk, V. filed on 07/25/2006.
- (17) "Printable, Flexible, and Stretchable Inorganic Light Emitting Diode Displays and Other Systems," Nuzzo, R. G.; Rogers, J. A.; Meitl, M.; Yu, C.; Ataman, O.; Ahn, J.; Yao, J.; Guo, X.; Choquette, K.; Giannopolous, A.; Kasten, A. M.; Baca, A. J.; Motala, M. A.; Park, S.. Filed 01/07/2007.

#### **INVITED LECTURES**

(June 1991-present; records prior to 1991 lost in move to UIUC):

- [1] Gordon Conference on Adhesion, Nashua, NH 1991.
- [2] University of Illinois at Urbana-Champaign, Department of Chemical Engineering Colloquium, 1991.
- [3] University of Illinois at Urbana-Champaign, Materials Science Colloquium, 1991.
- [4] ACS National Meeting, Washington, D.C., 1992.
- [5] Alcoa Corporation, Pittsburgh, PA 1992.
- [6] ACS Polymer Surfaces Workshop, Danvers, MA, 1992.
- [7] Advances in Polymers Workshop, Jakarta, Indonesia, 1993.
- [8] ACS National Meeting, Denver, CO 1993.
- [9] Ford Research, Dearborn, MI, 1993.
- [10] ETH-Zurich, Visiting Lecturer, Department of Polymer and Material Science, June 1993.
- [11] University of Illinois at Urbana-Champaign, Physical Chemistry Colloquium, 1993.
- [12] ACS Pittsburgh Regional Meeting, 1993.
- [13] ARPA Conference on New Directions for Environmental Technologies, Washington, D.C., 1994.
- [14] AVS Regional Meeting, Evanston, Illinois, 1994.
- [15] Workshop on Self-Assembling Systems, Washington, D.C., 1994.
- [16] University of Minnesota, Department of Chemistry, 1994.
- [17] Wayne State University, AVS Sponsored University/Industry Seminar Series, 1994.
- [18] Princeton University, Materials Research Institute, 1994.

- [19] California Institute of Technology, Department of Chemistry, 1995.
- [20] ARPA Conference on Printing Methods for Electronics Manufacturing, La Jolla, CA, 1995.
- [21] Twente University, Department of Chemistry, Enschede, the Netherlands, 1995.
- [22] Heidelberg University, Department of Applied Physical Chemistry, Heidelberg, Germany, 1995.
- [23] NATO Conference on Molecular Design, Estes Park, CO, 1995.
- [24] ARPA Conference on Green Manufacturing in Electronics, Raleigh, NC, 1995.
- [25] Beckman Institute, Nanotechnology Seminar Series, Urbana, IL, 1995.
- [26] Materials Research Society, Boston, MA, 1995.
- [27] MITI Harmonized Materials Design Conference, Plenary Lecture, Tsukuba, Japan, 1996.
- [28] DARPA Conference on Direct Methanol Fuel Cells, Los Angeles, CA, 1996.
- [29] James Franck Institute, University of Chicago, Chicago Illinois, 1996.
- [30] Lucent Technologies, Murray Hill, NJ, 1996.
- [31] American Chemical Society Summer National Meeting, Symposium on Nanoscale and Self-Assembling Systems, Orlando, FL, 1996.
- [32] Department of Applied Physics, University of Linköping, Guest Lecturer and External Examiner, Linköping, Sweden, 1996.
- [33] Michigan State University, Departmental Colloquium, Department of Chemistry, East Lansing, MI, 1996.
- [34] Ball State University, Departmental Colloquium, Department of Chemistry, Muncie, IN, 1996.
- [35] Tulane University, Departmental Colloquium, Department of Chemistry, New Orleans, LA, 1996.
- [36] ETH-Zurich, Guest Lecturer, Department of Chemistry, Zurich, Switzerland, 1997.
- [37] Plenary Lecture, SAOG Conference, Fribourg, Switzerland, 1997.
- [38] ACS National Meeting, Symposium in Memory of Brian Bent, San Francisco, CA 1997.
- [39] University of Chicago, Symposium on the Frontiers of Materials Chemistry, Chicago, IL 1997.
- [40] The General Electric Corporation, Corporate Research and Development Laboratory, Niskayuna, NY 1997.
- [41] Surface Canada 97: International Symposium on Surfaces and Interfaces, Plenary Lecture, Sherbrooke, Canada 1997.
- [42] ACS National Meeting, Symposium on Self-assembling Materials, Las Vegas, NV, 1997.
- [43] ACS National Meeting, Symposium on Advances in Microelectronics Fabrication and Lithography, Las Vegas, NV, 1997.
- [44] Iowa State University, Departmental Colloquium, Department of Chemistry, Ames, IA, 1997.
- [45] DARPA Workshop on Direct Oxidation Fuel Cells, Los Alamos, NM. 1997.
- [46] Workshop on Functional Assembly, Los Alamos National Laboratory, Los Alamos, NM, 1997.
- [47] NSF Workshop on Self-Assembling Materials, NSF/Arlington, VA, 1998.
- [48] ONR Workshop on Portable Power Systems, Ventura, CA, 1998.
- [49] Materials Research Institute Colloquium, Princeton University, Princeton, NJ, 1998.
- [50] ACS National Meeting, Symposium on Nanoscale Materials and Electrocatalysis, Dallas, TX, 1998.
- [51] Beckman Institute Colloquium on Mesoscale Systems and Machines, Urbana, IL, 1998.
- [52] International Organosilicon Conference, New Orleans, LA, 1998.

- [53] DARPA Workshop on Large Area Molecular Printing, DARPA, Arlington, VA, 1998.
- [54] Twente University, Departmental Colloquium, Department of Chemistry, Enschede, the Netherlands, 1998.
- [55] ACS National Meeting, Symposium Honoring David Allara, Boston, MA, 1998.
- [56] Defense Sciences Research Council, Isotope Effects in Chemical and Materials Systems, Arlington, VA, 1998.
- [57] Materials Research Society, Symposium on Molecular Materials and Microfabrication, Boston, MA, 1998
- [58] Los Alamos National Laboratory, Workshop on Complex Adaptive Matter, Los Alamos, NM, 1998.
- [59] NSF International Workshop on Current Problems in Complex Fluids, Oaxaca, Mexico 1999.
- [60] Louisiana State University, Chemistry Department Colloquium, Baton Rouge, LA, 1999.
- [61] Exxon Corporation, Energy Research and Development Laboratory, Baton Rouge, LA, 1999.
- [62] Wabash College, Department of Chemistry Seminar, Crawfordsville, IN, 1999.
- [63] ACS National Meeting, Symposium on New Methods for the Study of Electrochemical Phenomena and Processes, Anaheim, CA, 1999.
- [64] MRS Spring Meeting, Symposium on Novel Methods for Microfabrication and Assembly, San Francisco, CA, 1999.
- [65] Wright Patterson AFB, Materials Research Division Lecture, Dayton, OH, 1999.
- [66] DARPA Optoelectronics Conference, San Diego, CA, 1999.
- [67] Harvard University, Colloquium Honoring Professor George M. Whitesides, Cambridge, MA, 1999.
- [68] European Research Conferences Symposium on Fundamental Aspects of Surface Science, Castelvecchio Pascoli, Italy, 1999.
- [69] National Science Foundation Workshop on Materials Chemistry, Minneapolis, MN, 1999.
- [70] Clemson University, Department of Chemical Engineering Colloquium, Clemson, SC, 1999.
- [71] Materials Research Society, Symposium on the Optical and Electronic Properties of Organic Thin Film Materials, Boston, 1999.
- [72] Purdue University, Department of Chemistry, Inorganic Colloquium, West Lafayette, IN, 2000.
- [73] Stanford University, Department of Chemical Engineering Colloquium, Palo Alto, CA, 2000.
- [74] University of California at Berkeley, Department of Chemical Engineering Colloquium, Berkeley, CA, 2000.
- [75] Harvard University, Department of Chemistry, Physical Chemistry Colloquium, Cambridge, MA, 2000.
- [76] ACS National Meeting, Symposium Honoring Alvin W. Czanderna, San Francisco, CA, 2000.
- [77] ACS National Meeting, Symposium on Patterning, Functionalization, and the Reactivity of Complex Solid Surfaces, San Francisco, CA, 2000.
- [78] University of Washington, Department of Chemistry, Physical Chemistry Colloquium, Seattle, WA, 2000.
- [79] University of Oregon, Department of Chemistry, Organic and Inorganic Chemistry Colloquium, Eugene, OR, 2000.
- [80] Kimberley-Clark Corporation, Research Horizons Lecture, Roswell, GA, 2000.
- [81] ICSFS International Conference, Princeton University, Princeton, NJ, 2000.
- [82] DARPA MLP and Uncooled Detectors Workshop, Portland, OR, 2000.
- [83] Argonne National Laboratory, Nanosciences Workshop, Argonne, IL, 2000.
- [84] Materials Science Colloquium, University Of Wisconsin at Madison, Madison, WI, 2000.

- [85] Materials Research Society, Symposium D (Unconventional Devices and Patterning Methods), Boston, MA, 2000.
- [86] American Chemical Society, 2000 International Congress of Pacific Basin Societies, Symposium on Inorganic Thin Film Materials, Honolulu, HI, 2000.
- [87] Institute for Complex Adaptive Matter, Designing Emergent Matter Workshop, Santa Fe, NM, 2001.
- [88] Electrochemistry Gordon Conference, Ventura, CA, 2001.
- [89] Duke University, Joint Physics and Chemistry Colloquium on Nanoscale Materials, Durham, NC, 2001.
- [90] National Science Foundation, Lecture on Mesoscale Chemical Systems, Washington DC, 2001.
- [91] Materials Research Society, Symposium Z (Patterning Soft Materials), San Francisco, CA, 2001.
- [92] Chemistry Department Colloquium, Texas A&M University, College Station, TX, 2001.
- [93] EIPBN International Conference, Non-planar Patterning Symposium, Washington D.C., 2001
- [94] NSLS National Users Conference, Upton, NY, 2001
- [95] Analytical Chemistry Gordon Conference, New London, CN, 2001.
- [96] Electronic Materials Gordon Conference, New London, CN, 2001.
- [97] NSF Solid State Chemistry Workshop, Davis, CA, 2001.
- [98] NSF MPS Directorate Lecture on Policy Challenges and Opportunities in Research and Education in Chemistry, Washington DC 2001.
- [99] AVS International Conference, Porier Memorial Symposium, San Francisco, CA, 2001.
- [100] Institute of Chemistry, Academia Sinica, Taipei, Taiwan, 2002.
- [101] Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan, 2002.
- [102] Department of Chemistry, National Chung Cheng University, Chia-Yi, Taiwan, 2002.
- [103] ICCT 2002, International Symposium at National Taiwan University, Taipei, Taiwan, 2002.
- [104] Nanoscience and NanoTechnology, a joint US-Italy Workshop on Frontiers in Materials Research, National Science Foundation, Washington DC, 2002.
- [105] Materials Research Society, Symposium O (Chemical and Biological Sensors-Materials and Devices), San Francisco, CA, 2002.
- [106] Department of Chemistry, University of Nebraska, Lincoln, NE, 2002.
- [107] National Science Foundation, Presentation of the DMR Committee of Visitors Report, Arlington, VA, 2002.
- [108] ARO/DARPA Workshop on Bio Fuel Cells, Washington DC, 2002.
- [109] NSF Materials Chemistry Workshop, Session Chair, Newark, DE, 2002.
- [110] Corning Corporation, Corning, NY, 2002.
- [111] Lawrence Livermore National Laboratory, CMS Division Lecture, Livermore, CA, 2003.
- [112] University of Wyoming, Department of Chemistry, Laramie, WY, 2003.
- [112] Colorado State University, Department of Chemistry, Fort Collins, CO, 2003.
- [113] Winter Park Chemistry Snow Conference, Winter Park, CO, 2003.
- [114] American Chemical Society, Spring National Meeting, Adamson Award Lecture, New Orleans, LA, 2003.
- [115] American Vacuum Society 25<sup>th</sup> Annual Symposium on Surface Analysis, Urbana, IL, 2003.
- [116] MESA+ Colloquium Lecturer, University of Twente, Enschede, The Netherlands, 2003.

- [117] Chair and Co-Organizer, National Science Foundation Workshop and Study Panel, Chemical Bonding Centers, Arlington, VA, 2003.
- [118] Session Chair, Gordon Research Conference on the Chemistry of Electronic Materials, New London, CN, 2003.
- [119] Georgia Institute of Technology, Plenary Lecture, Symposium on Biomimetic Fabrication and Repair of Electrooptical Systems, Atlanta, GA, 2003.
- [120] Potter's Lodge Meeting, Recent Advances in Electrochemistry, Blue Mountain Lake, NY, 2003.
- [121] Weissberger-Williams Lecture, Kodak Corporation, Rochester, NY, 2003.
- [122] Materials Research Society National Meeting, Symposium M: Unconventional Methods of Fabrication, Boston, MA, 2003.
- [123] Colloquium, Department of Chemistry, University of Notre Dame, Notre Dame, IN, 2004.
- [124] Colloquium, Department of Chemistry, Northern Illinois University, DeKalb, IL, 2004.
- [125] Nanoscience Workshop, Royal Society of Chemistry, London, England, 2004.
- [126] Organosilicon Symposium, University of Pennsylvania, Philadelphia, PA, 2004.
- [127] DOE-BES Catalysis and Chemical Transformations Contractors Meeting, Germantown, MD, 2004.
- [128] Institute of Mining Minerals and Materials (IoM3) Conference on Nanotechnology, University of Manchester, Manchester, England 2004.
- [129] Argonne National Laboratory, Materials Science Division Colloquium, Argonne, IL, 2004.
- [130] NASA/SRC Workshop on Nanotechnology for Nanoelectronics, NASA Ames Research Center, Moffett Field, CA, 2004.
- [131] DARPA-DSRC Workshop on Assembly for Electronics Fabrication, San Diego, CA, 2004.
- [132] Oesper Award Symposium, University of Cincinnati, Cincinnati, OH, 2004.
- [133] DARPA Nanoelectronics Forum, Arlington, VA, 2004.
- [134] Gordon Research Conference on Chemical Reactions at Surfaces, Ventura, CA, 2005.
- [135] American Chemical Society Spring National Meeting, Adamson Award Symposium, San Diego, CA, 2005.
- [136] Materials Research Society National Meeting, Symposium AA, Smart Surfaces and Interfaces, San Francisco, CA, 2005.
- [137] EU Chem Conference on Self-Assembly, Royal Society of Chemistry, Sigtuna, Sweden, 2005
- [138] American Chemical Society Summer National Meeting, Symposium on Applications of Self Assembly in Surface and Interface Science, Washington, D.C., 2005.
- [139] Brookhaven National Laboratory, Distinguished Condensed Matter Science Colloquium, The Nanoscience of Macroscale Systems. Upton, NY, 2005.
- [140] Department of Physics, Yeshiva University, New York, NY, 2005.
- [141] University of Rochester, Department of Chemical Engineering Colloquium, Rochester, NY, 2005.
- [142] AVS National Meeting, Symposium on Nanoscale Materials Assembly, Boston, MA, 2005
- [143] Colloquium, Department of Chemistry, Pennsylvania State University, State College, PA, 2005.
- [144] Tutorial on Soft Lithography, Proctor and Gamble Miami Valley Laboratories, Cincinnati, OH, 2006.

- [145] American Chemical Society Spring National Meeting, Symposium of Nanoscale Fabrication, Atlanta, GA, 2006.
- [146] American Chemical Society Spring National Meeting, Adamson Award Symposium, Atlanta, GA, 2006.
- [147] Ritter Memorial Lectures (named lecturer), Miami University of Ohio, Oxford, OH, 2006.
- [148] MRS Spring Meeting, Symposium on Advances in Soft Lithography, San Francisco, CA, 2006.
- [149] Nano-NINN Conference, Harvard University, Cambridge, MA, 2006.
- [150] University of Bochum, GDCh Distinguished Lecture and Colloquium, Bochum, Germany, 2006.
- [151] University of Bielefeld, Physics Colloquium, Bielefeld, Germany, 2006.
- [152] Colloquium, Department of Chemistry, University of Toronto, Toronto, Canada, 2006.
- [153] American Chemical Society Summer National Meeting, Symposium on Nanoscale Self Assembly, San Francisco, CA, 2006.
- [154] Colloquium, Department of Chemistry, University of Texas at Austin, Austin, TX, 2006.
- [155] Colloquium, Department of Chemistry, New York University, New York, NY, 2007.
- [156] Colloquium, Nanosciences Institute, Northwestern University, Evanston, IL, 2007.
- [157] Colloquium, Department of Materials Sciences and Engineering, Georgia Institute of Technology, Atlanta, GA, 2007.
- [158] Co-leader (with G. M. Whitesides and R. Hoffmann), Micro and Nanofabrication Systems Workshop, an intensive week-long Chemistry Bonds Workshop in Chemistry for young scientists from all countries in the Middle East, supported by the U.S. National Science Foundation, Alexandria, Egypt, 2007.
- [159] American Chemical Society Spring National Meeting, Priestley Medal Award Symposium, Chicago, IL, 2007.
- [160] MRS Spring Meeting, Symposium on Advances in Printing Methods for Electronics, Optics, and Biomaterials, San Francisco, CA, 2007.

**PUBLICATIONS** (in primary refereed journals):

- [1] "Application of Lanthanide Shift Reagents to Alkyl Fluorides," San Filippo, Jr., J.; Nuzzo, R. G.; Romano, L. J. *J. Am. Chem. Soc.* **1975**, *97*, 2546.
- [2] "Substituent Effects on the Electronic Nature of Carbon-Bonded Fluorine," San Filippo, Jr., J.; Nuzzo, R. G.; Romano, L. J. *J. Org. Chem.* **1976**, *41*, 392-4.
- [3] "Selective Reduction of Sulfoxides," Nuzzo, R. G.; Simon, H. J.; San Filippo, Jr., J. *J. Org. Chem.* **1977**, *42*, 568-9.
- [4] "Bis(2-diphenylphosphinoethyl)amine. A Flexible Synthesis of Functionalized Chelating Diphosphines," Wilson, M. E.; Nuzzo, R. G.; Whitesides, G. M. *J. Am. Chem. Soc.* **1978**, *100*, 2269-70.
- [5] "Water-Soluble Complexes of Tertiary Phosphines and Rhodium (I) as Homogeneous Catalysts," Nuzzo, R. G.; Feitler, D. J.; Whitesides, G. M. *J. Am. Chem. Soc.* **1979**, *101*, 3683-5.
- [6] "Apparent Fluxionality in Diethyl(triethylphosphine)-platinum (II), a Coordinatively Unsaturated Intermediate in  $\beta$ -Hydride Elimination," McCarthy, T. J.; Nuzzo, R. G.; Whitesides, G. M. *J. Am. Chem. Soc.* **1981**, *103*, 1676-8.
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- [203] "A Permeation-Based Microfluidic Direct Formic Acid Fuel Cell (DFAFC)," Mitrovski, S. M.; Nuzzo, R. G. to be submitted.
- [204] "Optimized Multilayer Thin Film Substrates and Surface Chemistries for use in Patterned Protein Bioassays," Dong, R.; Mack, N. H.; Nuzzo, R. G. to be submitted.
- [205] "Triangular Elastomeric Phase Masks for Near-Field Phase Shift Lithography," Motala, M. A.; Jeon, S.; Rogers, J. A. Nuzzo, R. G. to be submitted.
- [206] "A New Adhesion Chemistry for Decal Transfer Lithography," Motala, M. A.; Nuzzo, R. G. to be submitted.