

Fraser Stoddart 12-Page Curriculum Vitae

Dr J Fraser Stoddart / Board of Trustees Professor of Chemistry / Northwestern University

Born May 24, 1942, Edinburgh, Scotland **Nationality** US **Email** stoddart@northwestern.edu
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Address Department of Chemistry, Northwestern University, 2145 Sheridan Road, Evanston, IL 60208, USA

Academic Career

2018– Visiting Professor of Chemistry at University of New South Wales / Australia
2014–2020 Thousand Talent Scholar at Tianjin University / China
2014– Board Member of Cycladex
2019– Board Member of Noble Panacea
2010–2017 Director of the Center for the Chemistry of Integrated Systems at Northwestern University
2008– Board of Trustees Professor of Chemistry at Northwestern University
2003–2007 Fred Kavli Chair in NanoSystems Sciences at University of California, Los Angeles
1997–2003 Saul Winstein Chair in Organic Chemistry at University of California, Los Angeles
1993–1997 Head of School of Chemistry at University of Birmingham, UK
1990–1997 Professor of Organic Chemistry at University of Birmingham, UK
1981–1990 Reader in Chemistry at University of Sheffield, UK
1978–1981 On secondment to ICI Corporate Laboratory, Runcorn, UK
1970–1978 Lecturer in Chemistry at University of Sheffield, UK
1970 ICI Research Fellowship in Chemistry at University of Sheffield, UK
Advisor: David Ollis FRS (deceased)
1967–1970 NRC Postdoctoral Fellowship at Queen's University, Kingston, Canada
Advisor: Ken Jones FRS (deceased)
1964–1966 DSIR Postgraduate Studentship at University of Edinburgh, UK
PhD Advisors: Sir Edmund Hirst FRS and Douglas Anderson (both deceased)
1960–1964 BSc Honours Chemistry, University of Edinburgh, UK

Honors (since 1994)

2021 Corresponding Member of the Australian Academy of Science
2020 ChemPubSoc Europe Fellowship
2020 Distinguished Fellowship of the Royal Society of New South Wales
2020 Honorary Lifetime Fellowship of the Indian Chemical Society
2019 Fellowship of the American Chemical Society
2019 Membership of the National Academy of Inventors, USA
2019 Honorary Doctor Degree (University of Brasilia)
2019 Science and Technology Cooperative Award (Chinese Government)
2018 Honorary Doctor of Science Degree (University of Southern Denmark)
2018 Honorary Doctor Degree (Yerevan State Medical University)
2018 Doctor Honoris Causa (Universidad Autonoma Madrid, Spain)
2018 Honorary Professorship of Yang Shixian Forum (Nankai University, China)
2018 Fellowship of the Royal Society of New South Wales
2018 Honorary Membership of the European Academy of Sciences and Arts
2018 Foreign Membership of the Chinese Academy of Sciences
2017 Membership of the EU Academy of Sciences
2017 Honorary Doctor of Science Degree (University of Nottingham)
2017 Great Immigrants for 2017 (Carnegie Corporation of New York)
2015 Honorary Professorship (University of Nottingham, UK)
2014 Membership of the National Academy of Sciences, USA
2013 Honorary Professorship (Jilin University, China)
2012 Fellowship of the American Academy of Arts and Sciences, USA
2011 Honorary Fellowship of the Royal Society of Chemistry, UK
2010 Honorary Doctor of Science Degree (St Andrews University, UK)
2010 Honorary Doctor of Science Degree (Trinity College Dublin, Ireland)

2009	Honorary Doctor of Science Degree (University of Sheffield, UK)
2008	Honorary Fellowship of the Royal Society of Edinburgh, UK
2007	Appointed Knight Bachelor by HM Queen Elizabeth II
2006	Honorary Doctor of Science Degree (University of Twente, The Netherlands)
2005	Fellowship of the American Association for the Advancement of Science, USA
2005	Honorary Doctor of Science Degree (University of Birmingham, UK)
2005	Honorary Professorship (East China University of Science and Technology)
2005	Carnegie Centenary Professorship of the Universities of Scotland, UK
1999	Fellowship of the German Academy (Leopoldina) of Natural Sciences
1998	Humboldt Fellowship, Germany
1994	Fellowship of the Royal Society of London, UK

Awards / Prizes / Medals (since 1993)

2017	Second Netherlands Award for Supramolecular Chemistry
2017	Scottish Innovation Award (Baird of Bute Society)
2017	Great Immigrants for 2017 (Carnegie Corporation of New York)
2016	Nobel Prize in Chemistry (Royal Swedish Academy of Sciences)
2014	Centenary Prize from the Royal Society of Chemistry, UK
2014	Alan G MacDiarmid Medal (University of Pennsylvania)
2014	Thomson-Reuters Highly Cited Researcher in Chemistry
2013	ICHEME North America Chemical Engineering Project of the Year Award
2012	Distinguished Citizen Award, Illinois Saint Andrew Society, Chicago, USA
2010	Undergraduate Chemistry Council Teacher of the Year Award (Northwestern University)
2010	Royal Medal of the Royal Society of Edinburgh presented by Prince Philip, Duke of Edinburgh
2010	International Society for Nanoscale Science, Computation and Engineering Award
2008	Davy Medal of the Royal Society of London
2008	Arthur C Cope Award (American Chemical Society)
2007	Feynman Prize in Nanotechnology (Experimental)
2007	Albert Einstein World Prize in Science
2007	Tetrahedron Prize for Creativity in Organic Chemistry
2007	Jabir Ibn Hyyan (Geber) Medal (Saudi Chemical Society)
2007	King Faisal International Prize in Science
2006	Fuson Award (University of Nevada)
2006	Mack Memorial Award (Ohio State University)
2005	University of Edinburgh Alumnus of the Year 2005 Award
2004	Nagoya Gold Medal in Organic Chemistry
2001	Herbert Newby McCoy Award (UCLA)
1999	Arthur C Cope Scholar Award (American Chemical Society)
1995	Adolf Steinhof Foundation Award (University of Kaiserslautern, Germany)
1994	Claire Bruylants Award (University of Louvaine-La-Neuve, Belgium)
1993	International Izatt-Christensen Award in Macrocyclic Chemistry

Selected Named Lectures and Presentations > 1000 Keynote / Plenary / Invited lectures at national / international conferences, university colloquia and industrial organizations over the past 40 years including the following named lectures:

Robert Damrauer Lectureship : University of Colorado, Denver (2019) • Watkins Lectureship : University of Kansas (2019) • Dodge Lectureship : Yale University (2019) • ICI Distinguished Lecture Series : University of Chicago (2019) • Thomas A Edison Memorial Lecture : Naval Research Laboratory / Washington DC (2019) • Giulio Natta Lecture : Politecnico di Milano (2019) • Mendel Lecture : Brno / Czech Republic (2019) • Kentucky Derby Lecture : University of Louisville (2019) • Frank C Mathers Lectureship: Indiana University (2019) • Rathore Memorial Lecture : Marquette University (2019) • Albert A Michelson Lecture : US Naval Academy (2019) • 2019 Wallace H Coulter Lecture: Pittsburgh Conference (2019)

• *Mautner Memorial Lectures* : UCLA (2018) • *2018 Mitchum E Warren Jr Lecture in Chemistry*: Vanderbilt University (2018) • *Howard Nobel Lectureship*: University of New South Wales (2018) • *Yang Shixian Forum*: Nankai University (2018) • *Centennial Lectureship*: University of Texas, El Paso (2018) • *Inaugural Walter A Szarek Lectureship*: Queen's University/Canada (2018) • *President's Lectureship*: University of Montana (2018) • *Sir James Irvine Memorial Lecture* : St Andrews University (2018) • *Samuel Weissman Lecture* : Washington University in St Louis (2018) • *Sir Jesse Boot Foundation Lecture* : University of Nottingham (2018) • *Apeloig Lecture* : Technion, Haifa, Israel (2018) • *Makhlouf Haddadin Lectureship*: American University of Beirut (2018) • *University of Padua: Galileo Lectureship* (2017) • *Virginia Tech: Friends of Larry Taylor Lectureship* (2017) • *NTU: Nanyang Chemistry Distinguished Lectureship* (2017) • *University of Sheffield: Krebs Lecture* (2017) • *Zhejiang University: Zhu Kezhen Distinguished Lectureship* (2017) • *Chemical Heritage Foundation: Ulliyot Public Lecture* (2016) • *Royal Society of Chemistry: Haworth Memorial Lecture* (2016) • *University of Durham: The Durham Lectures* (2016) • *Duke University: Douglas Hill Memorial Lecture* (2016) • *University of Pennsylvania, Philadelphia: MacDiarmid Medal Lecture* (2015) • *University of Texas, Austin: Vista Lecturer* (2014) • *University of California, Berkeley: Dauben Lecturer* (2014) • *Australian National University: Birch Lecturer* (2013) • *University of Iowa: Wawzonek Lecturer* (2013) • *University of Alabama: Cava Lecturer* (2013) • *Dartmouth College: Henry Dreyfus Chemistry Lecturer* (2013) • *Allegheny College: Lord Lecturer* (2012) • *McMaster University: MacLean Lecturer* (2012) • *Queen's University (Canada): Jones Lecturer* (2012) • *Stony Brook University: Bigeleisen Lecturer* (2012) • *McGill University: Aggarwal Lecturer* (2010) • *John Innes Centre, Norwich, UK: Chatt Lecturer* (2009) • *University of New Orleans: Davis Memorial Lecturer* (2009) • *University of Manitoba: Armes Lecturer* (2009) • *University of West Florida: Smart Lecturer* (2008) • *Georgia Institute of Technology: Sherry Memorial Lecturer* (2008) • *Appalachian State University: Morgan Science Lecturer* (2008) • *Baylor University: Gooch-Stephens Lecturer* (2008) • *Illinois Institute of Technology: Kilpatrick Lecturer* (2008)

Administrative Responsibilities

(1) Northwestern University

2012–2016	Chair of the Faculty Honors Committee in Chemistry
2012–2019	Member of the Department of Chemistry Space Committee
2010–2012	Member of the Senior Hire Search Committee in Chemistry
2010–Present	Director of the Center for the Chemistry of Integrated Systems
2008–2012	Member of Robert H Lurie Comprehensive Cancer Center
2008–2010	Member of Institute of BioNanotechnology in Medicine
2008–Present	Member of the International Institute for Nanotechnology
2008–Present	Member of the Faculty Honors Committee in Chemistry

(2) University of California at Los Angeles (UCLA)

2004–2007	Member of the Materials Creation Training Program
2004–2007	Member of the Research Advisor Council for UCLA
2003–2007	Director of the California NanoSystems Institute (CNSI)
2002–2007	Member of the Postdoctoral Advisory Committee
2002–2003	Acting Director of the California NanoSystems Institute (CNSI)
2000–2002	Member of the Board of the California NanoSystems Institute (CNSI)
1998–1999	Member of the Chemistry Departmental Library Committee
1997–2007	Member of the Chemistry Departmental Awards Committee

(3) Birmingham University

1995	Future Vice-Chancellor Selection Board
1992	Postgraduate Prospectus – Vice-Chancellor's Special Advisor
1993–1997	Chair of the School of Chemistry
1992–1993	Chairman of Chemistry Futures Group
1991–1997	Member of the Science Faculty Research Committee
1991–1994	Chairman of Science Faculty Industrial Liaison Panel
1990–1997	Chair of Organic Chemistry

(4) Sheffield University / ICI Corporate Laboratory

1988–1989	Member of Chemistry Departmental Research Committee
1982–1986	Organic Chemistry Representative of Departmental Study Group on Computing
1981–1984	Chemistry Departmental Representative on the Science Faculty Board
1978–1981	Organizer of the Organic Discussion Group Meetings at ICI Corporate Laboratory
1978–1990	Organic Chemistry Representative on NMR Committee

1974–1977	Organic Chemistry Representative on Staff-Student Committee
1973–1975	Organic Chemistry Representative on Departmental Safety Committee
1972–1973	Organic Chemistry Representative on Departmental Academic Development Committee

Membership/Fellowship of Professional Societies

Royal Society of Chemistry	Royal Netherlands Academy of Arts and Science
American Chemical Society	American Academy of Arts and Sciences
Royal Society of London	National Academy of Sciences
Royal Society of Edinburgh	EU Academy of Sciences and Arts
Imperial Society of Knights Bachelor	Chinese Academy of Sciences
German Academy (Leopoldina) of Science	Royal Society of New South Wales
American Association for the Advancement of Science	National Academy of Inventors
ChemPubSoc Europe	Indian Chemical Society
Australian Academy of Science	

Editorial Boards and Scientific Committees (since 1990)

2018–Present	Member of Editorial Advisory Board of ChemSystemsChem
2012–Present	Member of International Advisory Board ChemPlusChem
2010–2020	Editor-in-Chief of Applied Nanoscience
2010–Present	Member of International Advisory Board Macromolecular Rapid Communications
2007	Chairman of NSF Chemistry Committee Workshop on Emergent Phenomena
2007–2012	Member of Scientific Advisory Board of Molecular Foundry
2004	Member of the Wolf Prize in Chemistry Committee
2004–2014	Member of ACS Executive Director's 2020 Committee
2004–Present	Member of International Advisory Board of Chemistry World
2003–2005	Associate Editor of Organic Letters
2003	Member of Scientific Committee of the Nanoworld Institute, University of Geneva
2002–2003	Member of International Board of IUPAC Meeting in Ottawa
2000–2008	Member of Editorial Advisory Board of Crystal Growth and Design
2000	Member of NIH Medicinal Chemistry Study Section
1999	Member of the NSF Inorganic Chemistry CAREER Panel
1999–2005	Member of Editorial Advisory Board of Journal of Organic Chemistry
1999–2021	Member of Editorial Advisory Board of Organic Letters
1997–2012	Member of International Advisory Board of Collection of Czechoslovak Chemical Communications
1996	President of the Chemistry Section of British Association
1995–1997	Member of Scientific Advisory Board of Center for Nanoscale Science and Technology at Rice
1995–2013	Member of the International Advisory Board of Angewandte Chemie
1995–Present	Member of Honorary Board of Chemistry A European Journal
1994–1997	Member of EPSRC Chemistry College
1994–1995	Member of EPSRC / BBSRC Biomolecular Sciences Subcommittee
1994–1997	Chairman of NATO Special Program on Supramolecular Chemistry
1993–1998	Member of Editorial Board of Supramolecular Science
1992–1994	Member of SERC Biomolecular Sciences Subcommittee
1992–1994	Member of SERC Chemistry Committee
1992	Member of SERC Carbohydrate Science Panel
1991–1997	Member of Editorial Board of Synthesis
1991–1993	UK Representative and Assistant Coordinator of European Science and Technology Group
1991–1994	UK Representative on NATO Special Program on Supramolecular Chemistry
1991–1993	Member of SERC Molecular Electronics Committee
1991–1992	Member of SERC Molecular Recognition Initiative Review Panel
1991–1995	Member of Editorial Board of Chemical Society Reviews
1990–1995	Member of Advisory Board of Journal of Materials Chemistry

Professional Advancement of Graduate Students and Postdoctoral Fellows (since 2008)

• **Graduate Student / Postdoctoral Fellowships (since 2008)**

National Science Foundation (NSF) Graduate Research Fellowship

Carson Bruns (2009) • Albert Fahrenbach (2009) • Nathan Strutt (2010) • Alyssa-Jennifer Avestro (2011) • Dennis Cao (2011) • Edward Dale (2013)

National Defense Science and Engineering Graduate (NDSEG) Fellowship

Jonathan Barnes (2011) • Ian Gibbs-Hall (2014)

Fulbright Research Fellowship

Anthea Blackburn (2010) • Paul McGonigal / Postdoc (2012)

Netherlands Organisation for Scientific Research (NWO) Rubicon Fellowship

Michal Juriček / Postdoc (2011)

Northwestern University International Institute for Nanotechnology (IIN) Fellowship

Severin Schneebeli / Postdoc (2011) • Leah Witus / Postdoc (2012) • Zachary Kean / Postdoc (2015)

National Institutes of Health National Research Service Award (NIH NRSA) Fellowship

Leah Witus / Postdoc (2012)

• **Graduate Students to Postdoctoral Fellowships (since 2008)**

Yuping Wang – MIT (Robert Macfarlane)

Alyssa Avestro – University of Durham (1851 Fellow)

Matthew Belowich – Princeton University (David MacMillan)

Jason Spruell – University of California at Santa Barbara (Craig Hawker)

Lei Fang – Stanford University (Zhenan Bao)

Hao Li – University of Texas at Austin (Jonathan Sessler)

Andrew Sue – University of California at Berkeley (Omar Yaghi)

Srinivasan Sampath – Korea Institute of Advanced Science and Technology (Ali Coskun)

Ashish Basuray – Northwestern University (Fraser Stoddart)

Gokhan Barin – Northwestern University (Joseph Hupp) / University of California at Berkeley (Jeffrey Long)

Albert Fahrenbach – Harvard University (Jack Szostak)

Jonathan Barnes – Massachusetts Institute of Technology (Jeremiah Johnson)

Carson Bruns – University of California at Berkeley (Matt Francis)

Dennis Cao – Northwestern University (Sam Stupp)

Yuanning Feng – Northwestern University (Fraser Stoddart)

• **Graduate Students and Postdoctoral Fellows to Industry / Other (since 2008)**

Edward Dale (Intel)

Xisen Hou (Dow Chemical)

Matthew Belowich – Dow Chemical

Cory Valente – Dow Chemical

Subadeep Basu – Intel

Sergio Grunder – Dow Chemical (Switzerland)

Louisa Esdaile – Dow Chemical

Megan Boyle – Dow Chemical

Travis Gasa – Leydig, Voit & Mayer / Renmatix

Doug Friedman – National Academy of Sciences

Julien Iehl – Centre National de la Recherche Scientifique (CNRS)

Henri-Pierre Jacquot de Rouville – CNRS

James Henkelis – Dow Chemical

Michael Otley – BASF

Anthea Blackburn – Eonic

Nicholas Vermeulen – Dow Chemical

Alexander Shveyd – Intel

Ragnar Stoll – BASF (Germany)

Kaushik Patel – Sigma-Aldrich

Jason Spruell – Milliken

Sanjeev Dey – Milliken

Nathan Strutt – Intel
 Ashish Basuray – PreScouter
 Junling Sun – Tokyo Electron
 Karel Hartlieb – BASF
 Tracy Chen – University of Pennsylvania
 Magdalena Owczarek – Los Alamos National Laboratory
 Minh Nguyen – Hunt Oil
 Yi Shi – Proskauer Rose LLP
 Ommid Anamimoghadam – Evonik
 Michael Otley – BASF
 Anthea Blackburn (Econic)
 Xirui Gong – Northwestern University / Kellogg School of Management
 Hasmukh Patel – Aramco / Texas
 Baillie DeHaven – Pall Corporation
 Jacob Weber – Zymergen
 Yassine Beldjoudi – PanaceaNano
 Tamara Kosikova – Royal Society of Chemistry / Publishing

• **Graduate Students and Postdoctoral Fellows to Assistant Professorships** (since 2008)

Carson Bruns – University of Colorado	Andrew Sue – Tianjin University
Mark Lipke – Rutgers University	Leah Witus – Macalester College
Dennis Cao – Macalester College	Ozgur Bozdemir – Ataturk University
Alshakim Nelson – University of Washington	Yingwei Yang – Jilin University
Paul McGonigal – University of Durham	Sourav Saha – University of Florida
Chenfeng Ke – Dartmouth College	Ivan Aprahamian – Dartmouth University
Dongyang Chen – Fuzhou University	Ross Forgan – University of Glasgow
Hao Li – Zhejiang University	Florian Beuerle – University of Würzburg
Marco Frasconi – University of Padua	Cheng Wang – Wuhan University
Jonathan Barnes – Washington University at St Louis	Michal Juríček – Basel University
Lei Fang – Texas A&M at College Station	Severin Schneebeli – University of Vermont
Adam Whalley – University of Vermont	Jeremiah Gassensmith – University of Texas at Dallas
Ronald Smaldone – University of Texas at Dallas	Ali Trabolsi – New York University Abu Dhabi
Ali Coskun – University of Fribourg	Psaras McGrier – Ohio State University
Mark Olson – Tianjin University	William Dichtel – Northwestern University
Adam Braunschweig – CUNY Hunter College	Yanli Zhao – Nanyang Technical University
Ognjen Miljanic – University of Houston	Niveen Khashab – King Abdullah University of Science
Brian Northrup – Wesleyan University	Alyssa Avestro – University of York
Chuyang Cheng – Sichuan University	Haiyan Li – Shanghai Institute of Materia Medica
Zhichang Liu – Westlake University/China	Jimin Han – Beijing Institute of Technology
Srinivasan Sampath – Council of Scientific & Industrial Research/India	Cristian Pezzato – EPFL / Lausanne
Dong Jun Kim – University of New South Wales	Dengke Shen – Anhui University
Kang Cai – Nankai University	Margaret Meadows – Mercer College
Jimin Han – Beijing Institute of Technology	Damien Sluysmans – University of Liege
Mustafa Çetin – Kadir Has University	James Cooper – University of Reading
Melissa Dumartin – University of Toulouse	Kwan Woo Nam – Ewha Womans University
Qing-Hui Guo – Zhejiang University	Hongliang Chen – Zhejiang University
Wenqi Liu – University of South Florida	Yu Tan – Peking University

Top ~100 Publications from Over 1200 in Total

94. Second-sphere co-ordination of a cationic platinum complex by crown ethers. The X-ray crystal structure of $[\text{Pt}(\text{bipy})(\text{NH}_3)_2\text{-dibenzo-30-crown-10}]^{2+}[\text{PF}_6]_2 \cdot 0.6\text{H}_2\text{O}$ (H.M. Colquhoun, J.F. Stoddart, J.B. Wolstenholme, D.J. Williams, R. Zarzycki), *Angew. Chem., Int. Ed. Engl.* **1981**, *20*, 1051–1053.
163. Complexation of paraquat by a bisparaphenylene-34-crown-10 derivative (B.L. Allwood, N. Spencer, H. Shahriari-Zavareh, J.F. Stoddart, D.J. Williams), *J. Chem. Soc., Chem. Commun.* **1987**, 1064–1066.

201. Bisparaquat(1,4)cyclophane. A tetracationic multipurpose receptor (B. Odell, M.V. Reddington, A.M.Z. Slawin, N. Spencer, J.F. Stoddart, D.J. Williams), *Angew. Chem., Int. Ed. Engl.* **1988**, *27*, 1547–1550.
202. Isostructural alternately-charged receptor stacks. The inclusion complexes of hydroquinol and catechol dimethyl ethers with bisparaquat(1,4)cyclophane (P.R. Ashton, B. Odell, M.V. Reddington, A.M.Z. Slawin, J.F. Stoddart, D.J. Williams), *Angew. Chem., Int. Ed. Engl.* **1988**, *27*, 1550–1553.
218. A [2]catenane made to order (P.R. Ashton, T.T. Goodnow, A.E. Kaifer, M.V. Reddington, A.M.Z. Slawin, N. Spencer, J.F. Stoddart, C. Vicent, D.J. Williams), *Angew. Chem., Int. Ed. Engl.* **1989**, *28*, 1396–1399.
249. A molecular shuttle (P.L. Anelli, N. Spencer, J.F. Stoddart), *J. Am. Chem. Soc.* **1991**, *113*, 5131–5133.
264. Molecular Meccano 1. [2]Rotaxanes and a [2]catenane made to order (P.L. Anelli, P.R. Ashton, R. Ballardini, V. Balzani, M. Delgado, M.T. Gandolfi, T.T. Goodnow, A.E. Kaifer, D. Philp, M. Pietraszkiewicz, L. Prodi, M.V. Reddington, A.M.Z. Slawin, N. Spencer, J.F. Stoddart, C. Vicent, D.J. Williams), *J. Am. Chem. Soc.* **1992**, *114*, 193–218.
322. A chemically and electrochemically switchable molecular device (R.A. Bissell, E. Córdova, A.E. Kaifer, J.F. Stoddart), *Nature* **1994**, *369*, 133–137.
323. Olympiadane (D.B. Amabilino, P.R. Ashton, A.S. Reder, N. Spencer, J.F. Stoddart), *Angew. Chem., Int. Ed. Engl.* **1994**, *33*, 1286–1290.
339. Molecular Meccano 2. The self-assembly of [n]catenanes (D.B. Amabilino, P.R. Ashton, C.L. Brown, E. Córdova, L.A. Godínez, T.T. Goodnow, A.E. Kaifer, S.P. Newton, M. Pietraszkiewicz, D. Philp, F.M. Raymo, A.S. Reder, M.T. Rutland, A.M.Z. Slawin, N. Spencer, J.F. Stoddart, D.J. Williams), *J. Am. Chem. Soc.* **1995**, *117*, 1271–1293.
354. Dialkylammonium ion/crown ether complexes: The forerunners of a new family of interlocked molecules (P.R. Ashton, P.J. Campbell, E.J.T. Chrystal, P.T. Glink, S. Menzer, D. Philp, N. Spencer, J.F. Stoddart, P.A. Tasker, D.J. Williams), *Angew. Chem., Int. Ed. Engl.* **1995**, *34*, 1865–1869.
362. Molecular Meccano 3: Constitutional and translational isomerism in [2]catenanes and [n]pseudorotaxanes (D.B. Amabilino, P.L. Anelli, P.R. Ashton, G.R. Brown, E. Córdova, L.A. Godínez, W. Hayes, A.E. Kaifer, D. Philp, A.M.Z. Slawin, N. Spencer, J.F. Stoddart, M.S. Tolley, D.J. Williams), *J. Am. Chem. Soc.* **1995**, *117*, 11142–11170.
363. Molecular Meccano 4: The self-assembly of [2]catenanes incorporating photoactive and electroactive π -extended systems (P.R. Ashton, R. Ballardini, V. Balzani, A. Credi, M.T. Gandolfi, S. Menzer, L. Pérez-García, L. Prodi, J.F. Stoddart, M. Venturi, A.J.P. White, D.J. Williams), *J. Am. Chem. Soc.* **1995**, *117*, 11171–11197.
365. Interlocked and intertwined structures and superstructures (D.B. Amabilino, J.F. Stoddart), *Chem. Rev.* **1995**, *95*, 2725–2828.
383. Self-assembly in natural and unnatural systems (D. Philp, J.F. Stoddart), *Angew. Chem., Int. Ed. Engl.* **1996**, *35*, 1155–1196.
384. Pseudorotaxanes formed between secondary dialkylammonium salts and crown ethers (P.R. Ashton, E.J.T. Chrystal, P.T. Glink, S. Menzer, C. Schiavo, N. Spencer, J.F. Stoddart, P.A. Tasker, A.J.P. White, D.J. Williams), *Chem. Eur. J.* **1996**, *2*, 709–728.
426. Molecular logic. An XOR gate based on a mechanical molecular machine (A. Credi, V. Balzani, S.J. Langford, J.F. Stoddart), *J. Am. Chem. Soc.* **1997**, *119*, 2679–2681.
453. The self-assembly of a switchable [2]rotaxane (M.-V. Martínez-Díaz, N. Spencer, J.F. Stoddart), *Angew. Chem., Int. Ed. Engl.* **1997**, *36*, 1904–1907.
459. Anion-assisted self-assembly (M.C.T. Fyfe, P.T. Glink, S. Menzer, J.F. Stoddart, A.J.P. White, D.J. Williams), *Angew. Chem.* **1997**, *109*, 2158–2160; *Angew. Chem., Int. Ed. Engl.* **1997**, *36*, 2068–2070.
472. A chemically and electrochemically switchable [2]catenane incorporating a tetrathiafulvalene unit (M. Asakawa, P.R. Ashton, V. Balzani, A. Credi, C. Hamers, G. Mattersteig, M. Montalti, A.N. Shipway, N. Spencer, J.F. Stoddart, M.S. Tolley, M. Venturi, A.J.P. White, D.J. Williams), *Angew. Chem. Int. Ed.* **1998**, *37*, 333–337.
500. Molecular machines (V. Balzani, M. Gómez-López, J.F. Stoddart), *Acc. Chem. Res.* **1998**, *31*, 405–414.
546. Electronically configurable molecular-based logic gates (C.P. Collier, E.W. Wong, M. Belohradsky, F.M. Raymo, J.F. Stoddart, P.J. Kuekes, R.S. Williams, J.R. Heath), *Science* **1999**, *285*, 391–394.
582. A [2]catenane-based solid state electronically reconfigurable switch (C.P. Collier, G. Mattersteig, E.W. Wong, Y. Luo, K. Beverly, J. Sampaio, F.M. Raymo, J.F. Stoddart, J.R. Heath), *Science* **2000**, *289*, 1172–1175.
599. Preparation and properties of polymer-wrapped single-walled carbon nanotubes (A. Star, J.F. Stoddart, D. Steuerman, M. Diehl, A. Boukai, E.W. Wong, X. Yang, S.-W. Chung, H. Choi, J.R. Heath), *Angew. Chem. Int. Ed.* **2001**, *40*, 1721–1725.
602. Template-directed synthesis of a [2]rotaxane by clipping under thermodynamic control of a crown ether-like macrocycle around a dialkylammonium ion (P.T. Glink, A.I. Oliva, J.F. Stoddart, A.J.P. White, D.J. Williams), *Angew. Chem. Int. Ed.* **2001**, *40*, 1870–1875.
618. Molecular-based electronically switchable tunnel junction devices (C.P. Collier, J.O. Jeppesen, Yi Luo, J. Perkins, E.W. Wong, J.R. Heath, J.F. Stoddart), *J. Am. Chem. Soc.* **2001**, *123*, 12632–12641.
623. Dynamic covalent chemistry (S.J. Rowan, S.J. Cantrill, G.R.L. Cousins, J.K.M. Sanders, J.F. Stoddart) *Angew. Chem. Int. Ed.* **2002**, *41*, 898–952.
631. Two-dimensional molecular electronics circuits (Y. Luo, C.P. Collier, J.O. Jeppesen, K.A. Nielsen, E. Delonno, G. Ho, J. Perkins, H.-R. Tseng, T. Yamamoto, J.F. Stoddart, J.R. Heath), *ChemPhysChem* **2002**, *3*, 519–525.

634. Starched carbon nanotubes (A. Star, D.W. Steuerman, J.R. Heath, J.F. Stoddart), *Angew. Chem. Int. Ed.* **2002**, *41*, 2508–2512.
653. Toward chemically controlled nanoscale molecular machinery (H.-R. Tseng, S.A. Vignou, J.F. Stoddart), *Angew. Chem. Int. Ed.* **2003**, *42*, 1491–1495.
671. The metastability of an electrochemically controlled nanoscale machine on gold surfaces (H.-R. Tseng, D. Wu, N.X. Fang, X. Zhang, J.F. Stoddart), *ChemPhysChem* **2004**, *5*, 111–116.
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PENDING US PATENT APPLICATIONS (12)

PCT APPLICATIONS (20)

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