George Christou

**Birthplace** Limassol, Cyprus **Citizenship** USA and UK

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**Education**

1981-82 NATO Postdoctoral Fellow, Chemistry Dept, Harvard University, USA

1980 NATO Postdoctoral Fellow, Chemistry Dept, Stanford University, USA

1978-79 Postdoctoral Fellow, Department of Chemistry, Manchester University, UK

1974-77 PhD in Organic Chemistry, Exeter University, UK

1971-74 BSc (hons) in Chemistry, Exeter University, UK

**Positions Held**

2011- University Distinguished Professor, University of Florida, USA

2001- Drago Professor of Chemistry, University of Florida, USA

1998-01 Earl Blough Professor, Indiana University, USA

1991-98 Professor of Chemistry, Indiana University, USA

1989-91 Associate Professor of Chemistry, Indiana University, USA

1983-89 Assistant Professor of Chemistry, Indiana University, USA

1982-83 Lecturer and SRC Advanced Fellow, Chemistry Dept, Imperial College, London, UK

**Areas of Professional Interest**

Synthetic inorganic chemistry and its applications to areas such as molecular magnetism, molecular nanoparticles, supramolecular chemistry, and bioinorganic chemistry; transition metal and lanthanide cluster chemistry; molecular metal oxide nanoscience; physical inorganic chemistry; magnetochemistry; molecular magnetism; single-molecule magnets; supramolecular chemistry; synthetic models of the photosynthetic water oxidizing complex; water oxidation electrocatalysis using high oxidation state Mn and Mn/Ca carboxylate clusters. See <https://christou.chem.ufl.edu>

**Memberships**

Fellow of the Royal Society of Chemistry (FRSC), UK

Fellow of the American Chemical Society

# External Service

# American Chemical Society Symposium Nominations Committee, 1989-91

# NSF Committee visiting South Korean Universities and Institutions, 1992

# Editor for the Americas, and Special Issues Editor, of *Polyhedron* (1998 - present)

# Editorial Advisory Boards: *Inorganic Chemistry* (1996-8); *Chemtracts* (1997-2001); *Chemical Society Reviews* (2004-10); *Dalton Transactions* (2008-present); *Inorganic Chemistry* (2008-10)

* Scientific Advisory Panel on Nanoscience to the Supreme Court of Canada, 2006
* Research Consultant, University of Cyprus Chemistry Department, 2006 – present
* International Advisory Committee, *International Conference of Molecule-based Magnetism,* 2010-present
* Chair, Selection Committee, *Florida Award* of the ACS southeast region, 2010- present.
* National Scientific Funding Agency, *Chemistry and Materials Panel*, Ministry of Education, Greece, 2011
* Paper and proposal refereeing for various chemistry journals and USA, UK, and EU funding agencies

**Publications, Citations and Hirsch (h) Index**

# 603 peer-reviewed papers (as of Nov 1, 2020) in journals/books. <https://christou.chem.ufl.edu/publications>

h-index: 96 Total citations (excl. self-citations): 32,795 (as of Nov 1, 2020); average citations per paper: 43.1

Selected to the *Highly Cited Researchers 2014* and *2015* lists

**Awards and Honors**

1986 *Corday-Morgan Medal and Prize*, Royal Society of Chemistry, UK

1987 Alfred P. Sloan Foundation Fellow

1987 Camille and Henry Dreyfus Foundation Teacher-Scholar Fellowship

1990 Visiting Professor, Oxford University, UK

1. Wilsmore Foundation Fellow, University of Melbourne, Australia
2. *XXV Dwyer Medal and Memorial Lectureship*, Australian Chemical Society
3. European Community Lectureship, University of Ioannina, Greece
4. William Evans Fellowship, University of Otago, New Zealand
5. *Akron Award*, American Chemical Society

1998 NSF Award for Special Creativity

2000 *Teaching Excellence Recognition Award*, Indiana University

2000 Invited Professor, Pierre et Marie Curie Université, France

2000 *Award for Chemistry and Electrochemistry of Transition Metals*, Royal Society of Chemistry, UK

2002**–** Elected *Fellow of the Royal Society of Chemistry* (FRSC), UK

2003-08 Associate Member, Pacific Institute of Theoretical Physics, Vancouver, Canada

2006 Scientific Advisory Panel on Nanoscience to the Supreme Court of Canada

2006 NSF Award for Special Creativity

2007**–** Honorary Professor, University College London and London Centre for Nanotechnology, UK

2008 American Chemical Society *Florida Award* of the Southeastern USA Region

2008-11 University of Florida, Research Professorship Award

2009-12 University of Florida, Faculty Senator

2011**–** University Distinguished Professor

2014 Castle Plenary Lecture, University of South Florida

2014-15 Distinguished Adjunct Professor, King Abdulaziz University, Saudi Arabia

2014 Honorary Doctorate, University of Cyprus, Nicosia, Cyprus

2014 Selection to the Thompson-Reuters *Highly Cited Researchers 2014* List for Chemistry

2015 Doctoral Advisor-Mentor Award, UF College of Liberal Arts and Sciences

2015 Selection to the Thompson-Reuters *Highly Cited Researchers 2015* List for Chemistry

2016 Inducted into the *Academy of Distinguished Teaching Scholars*, University of Florida

2016 *Teacher-Scholar of the Year* Award, the University of Florida’s highest honor

2016**–** Elected *Fellow of the American Chemical Society* (ACSF)

2016 *Nyholm Prize for Inorganic Chemistry*, Royal Society of Chemistry, UK

2016 *ACS Southern Chemist Award*, American Chemical Society

2019 *ACS Award for Inorganic Chemistry*, American Chemical Society

2021 *Leadership Mentor Award* of the National High Magnetic Field Laboratory (NHMFL)

# Conference and Workshop Organization

# Co-organizer, *Inorganic Modeling of HDS, HDN and HDM Petroleum Chemistry* Joint Symposium, ACS Divisions of Inorganic Chemistry and Petroleum Chemistry; Boston National ACS Meeting, April 1990

# Founder and Organizer, *Florida Inorganic and Materials Symposium* (FIMS) Annual Meetings in Gainesville of 14 Florida Universities and Colleges (2003 - present)

# Co-founder and co-organizer, *North America-Greece-Cyprus Workshop on Paramagnetic Materials* (NAGC), Nicosia 2005, Syros 2007, Patras 2011, Larnaca 2013, Athens 2015, Paphos 2017, Sparta 2018.

* Co-founder and co-organizer, *Current Trends in Molecular and Nanoscale Magnetism* (CTMNM), Santorini 2006, Delphi 2008, Orlando 2010, Chalkidiki 2012, Larnaca 2014, Pylos 2016, Rhodes 2019.
* Co-organizer, *Functional Molecule-Based Magnets* Symposium of the Pacifichem Congress of Pacific Rim Countries, Waikiki, Hawaii, December 2010
* Organizing committee, 2012 *International Conference on Molecule-based Magnetism*, Orlando, FL, USA
* Founder and Organizer, *Showcase Symposium*, Annual Meeting of the ACS Florida Section, 2013 - present
* Founder and Organizer, *Molecular Magnetism in North America* (MAGNA) annual workshop, 2019 - present

**BIOSKETCH**

George Christou was born on the Mediterranean island of Cyprus, and grew up in London, England. He obtained his BSc and PhD degrees at Exeter University. His PhD was in organic chemistry, under the supervision of H. N. Rydon, and involved the synthesis by classical methods of cysteine-glycine polypeptides and their use as ligands to iron-sulfur clusters to model the ferredoxin proteins.

After a postdoctoral fellowship with C. D. Garner at the University of Manchester and a NATO Postdoctoral Fellowship with R. H. Holm at Stanford and Harvard Universities, both in bioinorganic chemistry targeted at the Mo/Fe/S cluster of the nitrogenase enzyme, he took up his first faculty position at Imperial College, London, in 1982, and initiated his interest in manganese chemistry that continues to this day. Two years later he moved to Indiana University, Bloomington, where he rose through the ranks to Blough Professor. In 2001, he moved to the University of Florida to take up his present position as the inaugural holder of the Drago Chair of Chemistry and was subsequently also promoted to University Distinguished Professor.

His research interests are in synthetic and physical-inorganic chemistry of the transition metals. He is particularly interested in 3d metal-oxo coordination cluster chemistry and its applications to fields such as bioinorganic chemistry, supramolecular chemistry and nanoscale magnetic materials. In the latter area, he was a pioneer in the new magnetic phenomenon of single-molecule magnetism, the ability of individual molecules to function as nanoscale magnets. These have potential applications in ultra-high-density information storage, quantum computing, spintronics, and other specialized areas. In bioinorganic chemistry, he has long been fascinated by the Mn4Ca oxygen-evolving complex (OEC) that carries out water oxidation to oxygen gas during photosynthesis in plants and cyanobacteria, the origin of almost all the oxygen gas on this planet, and has reported several generations of model complexes of the OEC over the years. In more recent years, he has also worked in a variety of other areas, such as supramolecular chemistry of magnetic molecules and their resulting quantum physics properties (such as exchange-biased quantum tunneling of the magnetization vector, and quantum superposition and entanglement states). Most recently, he has applied his synthetic skills to new directions involving the synthesis as molecular clusters of ultra-small nanoparticles of important metal oxides, specifically concentrating on: (i) the AMnO3 manganites with the perovskite structure that include important multiferroics such as BiMnO3; (ii) CeO2, a material with numerous applications as a catalyst in areas ranging from industrial and environmental catalysis to medicine, and (ii) new thrusts in Bi2O3, Mn2O3, and Fe2O3. As part of his various research projects over his career, he has collaborated with many types of spectroscopists and physicists, including quantum physicists. His work has led to over 600 peer-reviewed publications, of which 71 papers are in the physics literature.

He has received a variety of awards and honors over the years, including the 2000 *Award for Chemistry and Electrochemistry of Transition Metals* from the RSC, selection to the *Highly Cited Researchers 2014* and *2015* lists for Chemistry, the 2016 *Nyholm Prize for Inorganic Chemistry* from the RSC, and the 2019 *ACS Award for Inorganic Chemistry*, among others.

He is also a highly committed educator and conference organizer. He founded the *Florida Inorganic and Materials Symposium* (FIMS) student meetings in Gainesville every year, which have grown to encompass 14 Florida universities and colleges. He also co-founded and co-organizes every year two alternating biennial workshops, the specialized *Current Trends in Molecular and Nanoscale Magnetism* (CTMNM) workshops spanning chemistry and physics, and the broad *North America-Greece-Cyprus Workshop on Paramagnetic Materials* (NAGC) spanning chemistry, physics, biochemistry, medicine, and materials science. Most recently (2019) he founded the annual *Molecular Magnetism in North America* (MAGNA) workshop to bring together the North American community into a cohesive network. All these workshops strongly emphasize broad programs and inclusion of many talks from junior people (PhD students and postdocs).