

Prof. Selvan Demir

Affiliation: Michigan State University, sdemir@chemistry.msu.edu



Bibliometric data: SCOPUS ID: 36458291400, WOS ID: J-8395-2018

Selection of the 10 most relevant publications and/or patents

- 1) F. Delano, S. Demir, *Chem*, **2021**, 7(7), 1686.
- 2) IV, F. Delano, E. Castellanos, J. McCracken, S. Demir, *Chem. Sci.* **2021** 12(46), 15219.
- 3) C. Gould, E. Mu, V. Vieru, L.E. Darago, K. Chaakarawet, M.I. Gonzales, S. Demir, J.R. Long, *J. Am- Chem- Soc.*, **2020**, 142(50), 21197.
- 4) S. Demir, M.I. Gonzales, L.E. Darago, W.J. Evans, J.R. Long, *Nat. Commun.* **2017**, 8(1), 2144.
- 5) C. Gould, L.E. Darago, M.I. Gonzales, S. Demir, J.R. Long, *Angew. Chem. Int. Ed.*, **2017**, 56(34), 10103.
- 6) S. Demir, I.R. Jeon, J.R. Long, T.D. Harris, *Coord. Che. Rev.*, **2015**, 290(1), 149.
- 7) S. Demir, M. Nippe, M.I. Gonzales, J.R. Long, *Chem. Sci.*, **2014**, 5(12), 4702.
- 8) S. Demir, J.M. Zadrozny, M. Nippe, J. R. Long, *J. Am. Chem. Soc.*, **2012**, 135(45), 18546.
- 9) S. Demir, T. J. Mueller, J.W. Ziller, W.J. Evans, *Angew. Chem. Int. Ed.*, **2011**, 50(2), 515.
- 10) S. Demir, S.E. Lorenz, M. Fang, F. Fuche, G. Meyer, J.W. Ziller, W.J. Evans, *J. Am. Chem. Soc.*, **2010**, 132(2), 11151.

Title of the course: Synthesis of organometallic compounds

Course content detailed per lesson of 2 h

Lesson 1 (2h) Organometallic lanthanide complexes: synthesis and physical properties

Lesson 2 (2h) Organometallic actinide complexes: synthesis and physical properties

Lesson 3 (2h) Organometallic p-block metal complexes: synthesis and physical properties

Lesson 4 (2h) Breakthroughs and advances in the synthesis of organometallic compounds

Total: 8h

Period: July 2022

The lessons must be delivered online or both online and in presence. The lessons must be recorded and available to all the students that cannot take part to the lessons in streaming.

The Webex platform must be used

Type of Assessment: written test: written critical discussion (short essay) of a case-study/literature article that involves the techniques explained in the course). Max 5000 words.

The final evaluations will have to be validated maximum 1 month after the end of the course.

Selvan Demir

Michigan State University
Department of Chemistry
578 S Shaw Ln Rm 437
East Lansing, MI 48824, USA
Phone: +1-517-353-1080
email: sdemir@chemistry.msu.edu

Education

Postdoctoral Fellow with Prof. Jeffrey R. Long University of California, Berkeley, 10/2011-12/2015
Postdoctoral Researcher (Affiliate) Lawrence Berkeley National Laboratory, 10/2013-12/2015
with Dr. David K. Shuh and Prof. Jeffrey R. Long
Dr. rer. nat. *summa cum laude* in Chemistry with Prof. Gerd Meyer University of Cologne, 10/11/2010
including research with Prof. William J. Evans University of California, Irvine, within 2009/2010
Doctoral Studies University of Cologne, 9/2007-10/11/2010
Diplom *with distinction* in Chemistry with Prof. Gerd Meyer University of Cologne, 8/2007
Vordiplom (grade 1.1) University of Cologne, 11/2004
Studies of Chemistry University of Cologne, 4/2002-8/2007

Professional Experience

Assistant Professor of Chemistry (Tenure Track) Michigan State University, 1/2019-present
Junior Professor (W1) in Inorganic Chemistry (non-Tenure Track) University of Göttingen, 1/2016-12/2018

Research Experience

Postdoctoral Fellow University of California, Berkeley, 10/2011-12/2015
Advisor: Prof. Jeffrey R. Long
Description of Project: Synthesis of new lanthanide-based single-molecule magnets by using organic and inorganic radical ligands.

Postdoctoral Researcher Lawrence Berkeley National Laboratory, 10/2013-12/2015
Advisors: Dr. David K. Shuh and Prof. Jeffrey R. Long
Description of Projects: Towards the rational design of new transuranic single-molecule magnets. Synthesis and magnetic characterization of neptunium and plutonium complexes. Trivalent lanthanide and actinide separations with porous aromatic framework materials.

Research Associate University of Cologne, 11/2010-9/2011
Advisor: Prof. Gerd Meyer
Description of Project: High-temperature (>800 °C) synthesis of solid-state lanthanide cluster complexes. Developed a novel method of synthesizing pure multimetallic systems. Reactivity studies of lanthanide cluster complexes with various substrates.

Dr. rer. nat. Student University of Cologne, 9/2007-10/2010
Advisor: Prof. Gerd Meyer
Thesis Title: Scandium Cluster and Metallocene Chemistry
Description of Project: Synthesis and characterization of solid-state clusters and molecular rare-earth metal complexes with reactivity studies.

Selvan Demir

I received the Klaus Liebrecht-Award which is awarded by the College of Science of the University of Cologne for the best PhD thesis once a year and for only one or two people.

Visiting Scholar University of California, Irvine, 2/2009-8/2011
three stays, total of 14 months

Advisor: Prof. William J. Evans

Description of Project: Small molecule activation employing low-valent scandium, yttrium and lanthanide complexes

Diplom-Chemiker Degree Candidate University of Cologne, 1/2007-8/2007

Advisor: Prof. Gerd Meyer

Thesis Title: Überführung von Scandiumclustern aus dem Festkörper in Lösung

Description of Project: Synthesis of scandium solid state clusters and investigations on their solubility properties.

Honors and Awards

Invited talk in *Rising Star* ICMM2018 Pre-Conference Brazil, ICMM, 9/2018

Material Cost Allowances Fonds der Chemischen Industrie, 2/2017

Dorothea Schloezer Career Development Qualification Programme University of Göttingen, 2/2016-12/2016

DAAD Postdoctoral Fellowship (accepted) University of California, Berkeley, 10/2011-9/2013

DFG Postdoctoral Fellowship (offer declined) University of California, Berkeley, 2011-2013

Klaus Liebrecht-Award 2011 for best dissertation in natural sciences University of Cologne, 2/2012

Dr. rer. nat. *summa cum laude* in Chemistry University of Cologne, 10/2010

Poster Award XXI. Tage der Seltenen Erden, Bochum, 12/2008

Doctoral Fellowship, Grants for research at UCI (USA) Fonds der Chemischen Industrie, 2/2009-1/2010

Doctoral Fellowship Fonds der Chemischen Industrie, 2/2008-1/2010

Diplom *with distinction* in Chemistry University of Cologne, 8/2007

Teaching Experience

Professor of Chemistry, Advanced Inorganic Chemistry, CEM 411 Michigan State University, 1/10/2021-
Undergraduate Students present

Professor of Chemistry, Inorganic Capstone Lab, CEM 415 Michigan State University, 1/10/2021-present

Professor of Chemistry, Advanced Inorganic Chemistry, CEM 411 Michigan State University, 1/19/2021-
Undergraduate Students 4/30/2021

Professor of Chemistry, Selected Topics in Inorganic Chemistry Michigan State University, 8/29/2019-
Lanthanide and Actinide Chemistry 12/6/2019
Course for Graduate Students

Professor of Chemistry, General and Inorganic Chemistry for University of Göttingen, 4/2018-7/2018
Molecular Medicine students (lecture and lab)

Professor of Chemistry, Lanthanide and Actinide Chemistry University of Göttingen, 10/2017-2/2018
(lecture for Master and PhD students)

Professor of Chemistry, General and Inorganic Chemistry for University of Göttingen, 4/2017-7/2017
Molecular Medicine students (lecture and lab)

Professor of Chemistry, Lanthanide and Actinide Chemistry University of Göttingen, 10/2016-2/2017
(lecture for Master and PhD students)

Professor of Chemistry, General and Inorganic Chemistry for University of Göttingen, 4/2016-7/2016
Molecular Medicine students (lecture and lab)

Research Associate, Inorganic Chemistry Basic University of Cologne, 2/2010-9/2011

Selvan Demir

And Advanced Practical Courses Teaching Assistant, Inorganic Chemistry Basic	University of Cologne, 2/2008-1/2010
And Advanced Practical Courses Research Associate, Inorganic Chemistry Basic Practical Course	University of Cologne, 9/2007-1/2008
Teaching Assistant, Inorganic Chemistry Basic Practical Course	University of Cologne, 1/2007-9/2007

Scientific Publications (* = Corresponding Author)

- (28) “Taming Salophen in Rare Earth Metallocene Chemistry” Castellanos, E.; Benner, F.; **Demir, S.*** *Inorg. Chem. Front.* **2022**, DOI:10.1039/d1qi01331a. Selected for Outside Front Cover.
Invited article for the themed collection: Rare Earth Chemistry – In memory of Professor Xu Guangxian at his centenary
- (27) “Heteroleptic Rare-Earth Tris(metallocenes) Containing a Dibenzocyclooctatetraene Dianion” Pugliese, E. R.; Benner, F.; Castellanos, E.; Delano, IV, F.; **Demir, S.*** *Inorg. Chem.* **2022**, *61*, 2444-2454. Highlighted on the Cover.
- (26) “Pursuing the Excision of Carbon-Centred Hexanuclear Scandium Clusters {CSc₆} from Solid {CSc₆}I₁₂Sc” **Demir, S.***; Tyrra, W.; Schmitz, S.; Klein, A.*; Meyer, G.* *Aust. J. Chem.*, accepted.
- (25) “Organometallic Lanthanide Bismuth Cluster Single-Molecule Magnets” Zhang, P.; Benner, F.; Chilton, N. F.; **Demir, S.*** *Chem* **2021** DOI: 10.1016/j.chempr.2021.11.007.
- (24) “A Rare Earth Metallocene Containing a 2,2’-Azopyridyl Radical Anion” Delano IV, F.; Castellanos, E.; McCracken, J.; **Demir, S.*** *Chem. Sci.* **2021**, *12*, 15219-15228. Highlighted on the Outside Front Cover.
- (23) “Cyclopentadienyls and Phospholyls of the Group 3 Metals and Lanthanides” Benner, F.; Delano IV, F.; Pugliese, E.; **Demir, S.*** *Comprehensive Organometallic Chemistry IV* **2021**, *Accepted*.
- (22) “Uncovering pseudo-doublet ground states innate to U(IV) complexes through magnetism” Delano IV, F.; **Demir, S.*** *Chem* **2021**, *7*, 1686-1688.
- (21) “Slow Magnetic Relaxation in Mono- and Bimetallic Lanthanide Tetraimido-Sulfate S(NtBu)₄²⁻ Complexes” Jung, J.; Benner, F.; Herbst-Irmer, R.; **Demir, S.***; Stalke, D.* *Chem. Eur. J.* **2021**, *27*, 12310-12319. Highlighted on the Outside Front Cover. Cover profile: *Chem. Eur. J.* **2021**, *24*, 12236-12236.
- (20) “Substituent Effects on Exchange Coupling and Magnetic Relaxation in 2,2’-Bipyrimidine Radical-Bridged Dilanthanide Complexes” Gould, C. A.; Mu, E.; Veacheslav, V.; Darago, L. E.; Chakarawet, K.; Gonzalez, M. I.; **Demir, S.**; Long, J. R.* *J. Am. Chem. Soc.* **2020**, *142*, 21197–21209.
- (19) „Inorganic Chemistry trends: Bioinorganic and coordination chemistry“ Daumann, L.*; Hohloch, S.*; **Demir, S.*** *Nachr. Chem.* **2019**, *67*, 65-80.
- (18) „Anorganische Chemie 2018: Koordinationschemie und Bioanorganik“ Apfel, U.-P.*; Berkefeld, A.*; **Demir, S.*** *Nachr. Chem.* **2018**, *66*, 230-239.
- (17) “Slow Magnetic Relaxation in a Neodymium Metallocene Tetraphenylborate Complex” **Demir, S.***, Meihaus, K. R.; Long, J. R.* *J. Organomet. Chem.*, (invited contribution for special issue on the occasion of Prof. William J. Evans 70th birthday), **2018**, *857*, 164-169.

Selvan Demir

-
-
- (16) “Giant Coercivity and High Magnetic Blocking Temperatures for N_2^{3-} Radical-Bridged Dilanthanide Complexes Upon Ligand Dissociation“ **Demir, S.***; Gonzalez, M. I.; Darago, L. E.; Evans, W. J.; Long, J. R.* *Nature Commun.* **2017**, doi:10.1038/s41467-017-01553-w.
- (15) “Slow Magnetic Relaxation in a Dysprosium Ammonia Metallocene Complex” **Demir, S.***; Boshart, M. D.; Corbey, J. F.; Woen, D. H.; Gonzalez, M. I.; Ziller, J. W.; Meihaus, K. R.; Long, J. R.*; Evans, W. J.* *Inorg. Chem.* **2017**, *56*, 15049–15056.
- (14) „Anorganische Chemie 2016: Koordinationschemie und Bioanorganik“ Apfel, U.-P.*; Berkefeld, A.*; **Demir, S.*** *Nachr. Chem.* **2017**, *65*, 245-254.
- (13) “A Radical-Bridged Trinuclear Lanthanide Single-Molecule Magnet” Gould, C. A.; Darago, L. E.; Gonzalez, M. I.; **Demir, S.**; Long, J. R.* *Angew. Chem. Int. Ed.* **2017**, *56*, 10103-10107.
- (12) “Perspectives on Neutron Scattering in Lanthanide-Based Single-Molecule Magnets and a Case Study of the $Tb_2(\mu-N_2)$ System” Prša, K.; Nehr Korn, J.; Corbey, J. F.; Evans, W. J.; **Demir, S.**; Long, J. R.; Guidi, T.; Waldmann, O.* *Magnetochemistry* **2016**, *2*, 45.
- (11) “Solubility of Nanocrystalline Cerium Dioxide: Experimental Data and Thermodynamic Modeling” Plakhova, T. V.; Romanchuk, A.; Yakunin, S.; Dumas, T.; **Demir, S.**; Wang, S.; Minasian, S. G.; Shuh, D. K.; Tyliszczak, T.; Shiryaev, A.; Egorov, A.; Ivanov, V.; Kalmykov, S. N.* *J. Phys. Chem. C* **2016**, *120*, 22615–22626.
- (10) “Extraction of Lanthanide and Actinide Ions from Aqueous Mixtures Using a Carboxylic Acid-Functionalized Porous Aromatic Framework” **Demir, S.**; Brune, N. K.; Van Humbeck, J. F.; Mason, J. A.; Plakhova, T. V.; Wang, S.; Tian, G.; Minasian, S. G.; Tyliszczak, T.; Yaita, T.; Kobayashi, T.; Kalmykov, S. N.; Shiwaku, H.; Shuh, D. K.; Long, J. R.* *ACS Cent. Sci.* **2016**, *2*, 253-265.
- (9) “Radical Ligand-Containing Single-Molecule Magnets” **Demir, S.**; Jeon, I.-R.; Long, J. R.*; Harris, T. D.* *Coord. Chem. Rev.* **2015**, 289-290, 149-176.
- (8) “Exchange Coupling and Magnetic Blocking in Dilanthanide Complexes Bridged by the Multi-Electron Redox-Active Ligand 2,3,5,6-Tetra(2-pyridyl)pyrazine” **Demir, S.**; Nippe, M.; Gonzalez, M. I.; Long, J. R.* *Chem. Sci.* **2014**, *5*, 4701-4711.
- (7) “Large Spin Relaxation Barriers for the Low-Symmetry Organolanthanide Complexes $[Cp^*_2Ln(BPh_4)]$ (Cp^* = pentamethylcyclopentadienyl; Ln = Tb, Dy)” **Demir, S.**; Zadrozny, J. M.; Long, J. R.* *Chem. Eur. J.* **2014**, *20*, 9524-9529.
- (6) “Exchange Coupling and Magnetic Blocking in Bipyrimidyl Radical-Bridged Dilanthanide Complexes” **Demir, S.**; Zadrozny, J. M.; Nippe, M.; Long, J. R.* *J. Am. Chem. Soc.* **2012**, *134*, 18546-18549.
- (5) “Scandium and Yttrium Metallocene Borohydride Complexes: Comparisons of $(BH_4)^{-}$ vs $(BPh_4)^{-}$ Coordination and Reactivity” **Demir, S.**; Siladke, N. A.; Ziller, J. W.; Evans, W. J.* *Dalton Trans.* **2012**, *41*, 9659-9666.
- (4) “Sigma Bond Metathesis Reactivity of Allyl Scandium Metallocenes with Diphenyldichalcogenides, $PhEPh$ (E = S, Se, Te)” **Demir, S.**; Mueller, T. J.; Ziller, J. W.; Evans, W. J.* *Organometallics* **2011**, *30*, 3083-3089.
- (3) “Tris(polyalkylcyclopentadienyl) Complexes: The Elusive $[(\eta^5-C_5R_5)_2M(\eta^1-C_5R_5)]$ Structure and Trihapto Cyclopentadienyl Coordination Involving a Methyl Substituent” **Demir, S.**; Mueller, T. J.; Ziller, J. W.; Evans, W. J.* *Angew. Chem. Int. Ed.* **2011**, *50*, 515-518.

Selvan Demir

- (2) “Facile Insertion of N₂O into Metal-Carbon Bonds of Metallocene Allyl Complexes to Form (RN₂O)¹⁻ Ligands” **Demir, S.**; Montalvo, E.; Ziller, J. W.; Meyer, G.; Evans, W. J.* *Organometallics* **2010**, *29*, 6608-6611.
- (1) “Synthesis, Structure and Density Functional Theory Analysis of a Scandium Dinitrogen Complex, [(C₅Me₄H)₂Sc]₂(μ-η²:η²-N₂)” **Demir, S.**; Lorenz, S. E.; Fang, M.; Furche, F.; Meyer, G.; Ziller, J. W.; Evans, W. J.* *J. Am. Chem. Soc.* **2010**, *132*, 11151-11158.

Scientific Presentations (1 invited Half-Plenary talk, 65 invited talks, 17 contributed talks, 11 posters). Planned invited talks between April and December 2022: 9 invited talks, 1 discussion leader.

- (104) December 6-10. ACMM-II. Asian Conference on Molecular Magnetism. *Invited*. IISER Bhopal. India. *Invited*.
- (103) October 16-21. International Conference on Quantum Materials and Technologies (ICQMT)
- (102) October 8-11. Yamada Conference and IMR symposium. Sendai, Japan *Invited*.
- (101) July 10-14. Gordon Research Conference, Organometallic Chemistry. *Invited* Discussion Leader. <https://www.grc.org/organometallic-chemistry-conference/2022/>
- (100) July 4-7. ECMM. Rennes, France. *Invited*.
- (99) June 6-10. Telluride Science Research Center (TSRC) Workshop entitled From Fundamentals of Molecular Spin Qubit Design to Molecule-Enabled Quantum Information. *Invited*.
- (98) May 8-13. 9th North America-Greece-Cyprus Workshop on Paramagnetic Materials (NAGC). *Invited*. See below (postponed (80)).
- (97) May 8-13. MRS Meeting Honolulu. *Invited*.
- (96) May 1-4. MAGNA. Gainesville, Florida. *Invited*.
- (95) April 26 Angular Momentum Series. *Invited*.
- (94) “Multifunctional Lanthanide Metallocenes: From High-Performance Single-Molecule Magnets to Small Molecule Activation”. **Selvan Demir**, Seminar (virtual), University of Glasgow, School of Chemistry, UK, January 19, 2022 (talk, 10 am EST). *Invited*.
- (93) “Giant Coercivity and Magnetic Blocking in Molecular Radical-Bridged Lanthanide Compounds” **Selvan Demir**, 2022 Joint MMM-Intermag Conference, Session title: Rare-earth Hard Magnetic Materials, New Orleans, Louisiana, USA, January 10-14, 2022 (talk, Jan 12, 8:42 to 8:54 am, CC-01, DOA-09).
- (92) “The Versatility of Lanthanide Metallocene Complexes: From Single-Molecule Magnets to Reactivity Studies” **Selvan Demir**, Seminar, Cornell University, Ithaca, New York, USA, May 13, 2021 (talk). *Invited*. **Postponed to Fall 2021**.

Selvan Demir

- (91) “The Versatility of Lanthanide Metallocene Complexes: From Single-Molecule Magnets to Reactivity Studies” **Selvan Demir**, Seminar, University Dublin College, Dublin, Ireland, May 12, **2021** (talk). *Invited. Postponed to Fall 2021.*
- (90) “Large Coercivity and Magnetic Blocking in Multinuclear Organometallic Lanthanide Single-Molecule Magnets” Florian Benner, Francis Delano IV, Peng Zhang, **Selvan Demir**, Pacificchem 2021 (virtual), *Molecular Spintronics Based on Coordination Chemistry (Session #224)*, Honolulu, Hawaii, December 16-21, **2021** (talk, Dec 20, 1:30 pm to 2:00 pm, Session Host: Masahiro Yamashita, Invited by Prof. Masahiro Yamashita). *Invited.*
In addition, one of the *organizers* of symposium *Molecular Spintronics Based on Coordination Chemistry (Session #224)*
- (89) “Employing Radical-Ligands in Lanthanide Single-Molecule Magnet Design” Florian Benner, Francis Delano IV, Peng Zhang, **Selvan Demir**, Pacificchem 2021 (virtual), *Advanced Multifunctional Molecular Materials Based on Dynamic Spin (Session #232)*, Honolulu, Hawaii, December 16-21, **2021** (talk, Dec 19, 4:25 pm to 4:55 pm, Session Host: Shinya Hayami, Ryo Ohtani, Yoshihiro Sekine, Invited by Prof. Shinya Hayami). *Invited.*
In addition, one of the *organizers* of symposium *Advanced Multifunctional Molecular Materials Based on Dynamic Spin (Session #232)*.
- (88) “Multifunctional Lanthanide Metallocenes: From High-Performance Single-Molecule Magnets to Small Molecule Activation” Peng Zhang, Florian Benner, Francis Delano IV, **Selvan Demir**, Pacificchem 2021 (virtual), *Early Transition Metal Complexes: From Rare Bond Types to Useful Catalysis (Session #258)*, Honolulu, Hawaii, December 16-21, **2021** (talk, Dec 17, 1:30 pm to 1:55 pm, Session Host: Laurel Schafer, Invited by Prof. Aaron Odom).
I was invited to give here an invited talk too, however, due to a maximum number of two invited talks at Pacificchem 2021, I chose to give a contributed talk for this symposium.
- (87) “Multifunctional Lanthanide Metallocenes: From High-Performance Single-Molecule Magnets to Small Molecule Activation” **Selvan Demir**, Inorganic Chemistry Seminar, Wayne State University, Detroit, MI, December 2, **2021**. *Invited.*
- (86) “Large Coercivity and Magnetic Blocking in Lanthanide Single-Molecule Magnets” **Selvan Demir**, 7th International Conference on Superconductivity and Magnetism, Bodrum, Turkey, April 19-25, **2020** (talk). *Invited Half Plenary Speaker.*
<https://supermag.com.tr/icsm/2020/scientific-program/wrs/>
Entire meeting postponed to October 22-28, 2021, due to Coronavirus (COVID-19).
- (85) “Employing New Radical Ligands in Lanthanide Single-Molecule Magnet Design” Florian Benner, Francis Delano IV, **Selvan Demir**, 17th International Conference on Molecule-based Magnets – ICMM2021, Manchester, UK, June 14-18, **2021** (talk). *Online due to COVID-19. It was challenging to be selected for a talk.*
- (84) “Demir Research Group and New Opportunities” **Selvan Demir**, Faculty/Specialist Meeting with Dean Prof. Phil Duxbury, Michigan State University, East Lansing, Michigan, USA, March 22, 2021 (talk). *Invited.*

Selvan Demir

- (83) “Large Coercivity and Magnetic Blocking in Radical-Bridged Lanthanide Single-Molecule Magnets” Florian Benner, Francis Delano IV, Peng Zhang, **Selvan Demir**, The 1st Asian Conference on Molecular Magnetism (ACMM 2020), Fukuoka, Japan, March 8-11, **2020** (talk). *Invited*.
<http://www.scc.kyushu-u.ac.jp/Sakutaibussei/ACMM2020/speakers.html>
Entire meeting postponed to March 7-10, **2021**, online conference. The talk was given on March 8, **2021**.
- (82) “The Versatility of Lanthanide Metallocene Complexes: From Single-Molecule Magnets to Reactivity Studies” **Selvan Demir**, Faculty Seminar, Brown and Williamson Series, University of Louisville, Louisville, Kentucky, USA, February 26, **2021** (talk). *Invited*.
- (81) “Multifunctional Lanthanide Metallocenes: From High-Performance Single-Molecule Magnets to Small Molecule Activation” **Selvan Demir**, International Symposium on Nano & Supramolecular Chemistry (12th ISNSC), Adam Mickiewicz University, Poznań, Poland, June 21-24, **2020** (talk). *Invited*.
The 12th ISNSC meeting postponed to August 21-24, **2022**, in Lisbon, and the 14th ISNSC meeting will take place in Poznań due to Coronavirus (COVID-19).
- (80) “Magnetic Blocking in Organometallic Lanthanide Single-Molecule Magnets” Florian Benner, **Selvan Demir**, 9th North America-Greece-Cyprus Workshop on Paramagnetic Materials (NAGC 2020), Ayia Napa, Cyprus, May 25-29, **2020** (talk). *Invited*.
Entire meeting postponed due to Coronavirus (COVID-19).
- (79) “High-Performance Organometallic Lanthanide Single-Molecule Magnets” Florian Benner, Francis Delano IV, Peng Zhang, **Selvan Demir**, ACS Central Regional Meeting (CERM 2020), Scheduled invited speaker in the Symposium *Ligand Design for Homogeneous Transition Metal Chemistry* (Abstract ID: 3408099), Columbus, Ohio, USA, May 27-29, **2020** (talk). *Invited*.
Entire meeting cancelled due to Coronavirus (COVID-19).
- (78) “Magnetic Blocking in Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Intermag 2020 Conference (Digest Designation: DH-06, Scheduled for May 6), Montreal, Canada, May 4-8, **2020** (talk).
Entire meeting cancelled due to Coronavirus (COVID-19).
- (77) “Mononuclear Lanthanide Single-Molecule Magnets Containing Redox-Active Ligands” Florian Benner, **Selvan Demir**, 259th ACS National Meeting & Exposition, *Lanthanide and Actinide Chemistry Session* (INOR 955, scheduled March 25), Philadelphia, Pennsylvania, USA, March 22-26, **2020** (talk).
Entire meeting cancelled due to Coronavirus (COVID-19).
- (76) “High-Performance Organometallic Lanthanide Single-Molecule Magnets” Florian Benner, Francis Delano, Peng Zhang, **Selvan Demir**, 259th ACS National Meeting & Exposition, Scheduled invited speaker in ACS Award in Organometallic Chemistry and F. Albert Cotton Award in Synthetic Inorganic Chemistry Joint Symposium in Honor of Milton R. Smith, III & Daniel J. Mindiola (INOR 82, scheduled March 22), Philadelphia, Pennsylvania, USA, March 22-26, **2020** (talk). *Invited*.
Entire meeting cancelled due to Coronavirus (COVID-19). This symposium is scheduled for ACS Fall Meeting 2022 in Chicago.
- (75) “Large Coercivity and Magnetic Blocking in Radical-Bridged Lanthanide Single-Molecule Magnets” Florian Benner, Francis Delano IV, Peng Zhang, **Selvan Demir**, Post-ACMM Symposium: Advanced multifunctional molecular materials based on dynamic spin, Kumamoto University, Kumamoto, Japan, March 12-14, **2020** (talk). *Invited*.
<http://www.sci.kumamoto-u.ac.jp/~hayami/POSTACMM/>

Selvan Demir

Entire meeting cancelled due to Coronavirus (COVID-19).

- (74) “Magnetic Blocking in Lanthanide-Based Radical-Bridged Single-Molecule Magnets” **Selvan Demir**, Virtual Meeting mirroring session Single-Molecule Magnets J46 at 2020 APS March Meeting organized by Prof. Jonathan Friedman, replaced speaker Dian-Teng Chen, March 4, **2020** (talk).
- (73) “Magnetic Blocking in Lanthanide-Based Radical-Bridged Single-Molecule Magnets” **Selvan Demir**, Molecular Magnetism in North America (MAGNA) Conference, St. Simons Island, Georgia, USA, February 21-24, **2020** (talk). *Invited*.
In addition, *chairwoman* in second afternoon session on February 22nd, **2020**.
- (72) “Radical-Bridged Lanthanide Single-Molecule Magnets” Peng Zhang, **Selvan Demir**, Michigan Inorganic Chemistry Symposium, East Lansing, MI, December 7, **2019** (poster).
- (71) “Lanthanide-Based Metal-Organic Frameworks Containing Redox-Active Ligands” Francis Delano IV, **Selvan Demir**, Michigan Inorganic Chemistry Symposium, East Lansing, MI, December 7, **2019** (poster).
- (70) “Magnetic Exchange Coupling in Lanthanide Metallocene Bipyridine Complexes” Florian Benner, **Selvan Demir**, Michigan Inorganic Chemistry Symposium, East Lansing, MI, December 7, **2019** (poster).
- (69) “Employing Radical-Ligands in Lanthanide-Based Single-Molecule Magnet Design” **Selvan Demir**, Chemistry Seminar, Oakland University, Rochester, Michigan, USA, November 6, **2019** (talk). *Invited*.
- (68) “Giant Coercivity and Magnetic Blocking in Radical-Bridged Lanthanide Single-Molecule Magnets” **Selvan Demir**, The 11th International Symposium on Nano & Supramolecular Chemistry (ISNSC-11) & The 3rd Forum on Industrial Materials (WFIM-3), Qing Yang, Chi Zhou City, China, October 12-16, **2019** (talk on October 13th). *Invited*.
In addition, *chairwoman* in session for student oral presentations on October 14th, **2019**.
- (67) “Multifunctional Lanthanide Metallocene Complexes: From High-Performance Single-Molecule Magnets to Small Molecule Activation” **Selvan Demir**, “Symposium Catalysis”, Kyungpook National University, Daegu, South Korea, October 8, **2019** (talk). *Invited*.
- (66) “Multifunctional Lanthanide Metallocene Complexes: From High-Performance Single-Molecule Magnets to Small Molecule Activation” **Selvan Demir**, Seminar, Busan National University, Busan, South Korea, October 7, **2019** (talk). *Invited*.
- (65) “Giant Coercivity and High Magnetic Blocking Temperatures for Radical-Bridged Complexes” **Selvan Demir**, 4th Bordeaux Olivier Kahn Discussions (BOOK-D), Bordeaux, France, June 25-28, **2019** (talk). *Invited*.
- (64) “Giant Coercivity and Magnetic Blocking in Radical-Bridged Lanthanide Single-Molecule Magnets” **Selvan Demir**, XXIX. Tage der Seltenen Erden, Terrae Rarae 2019, Stockholm, Sweden & Helsinki, Finland, May 30 to June 1, **2019** (talk). *Invited*.
- (63) “Employing Radical-Ligands in Lanthanide-Based Single-Molecule Magnet Design” **Selvan Demir**, 8th Workshop on “Current Trends in Molecular and Nanoscale Magnetism (2019 CTMNM), Rhodes, Greece, May 27-31, **2019** (talk). *Invited*.

Selvan Demir

- (62) “Employing Radical-Ligands in Lanthanide-Based Single-Molecule Magnet Design” **Selvan Demir**, 12th European School on Molecular Nanoscience (ESMolNa 2019), Elche, Spain, May 19-24, **2019** (talk). *Invited*.
- (61) “Magnetic Blocking in Radical Ligand-Containing Lanthanide Single-Molecule Magnets” **Selvan Demir**, Phase Transition and Dynamical Properties of Spin Transition Materials (PDSTM) 2019, Gainesville, Florida, USA, May 6-10, **2019** (talk). *Invited*.
In addition, *Session Chair* on May 9th, 2019.
- (60) “Mononuclear Radical-Containing Lanthanide Complexes” **Selvan Demir**, Seminar, MagLab, Tallahassee, Florida, USA, April 10, **2019** (talk). *Invited*.
- (59) “Multifunctional Lanthanide Metallocenes: From High-Performance Single-Molecule Magnets to Small Molecule Activation” **Selvan Demir**, Inorganic Chemistry Seminar, Florida State University, Tallahassee, Florida, USA, April 9, **2019** (talk). *Invited*.
- (58) “Large Coercivity and Magnetic Blocking in Radical-Bridged Lanthanide Single-Molecule Magnets” **Selvan Demir**, Inorganic Chemistry Seminar, University of Florida, Gainesville, Florida, USA, April 8, **2019** (talk). *Invited*.
- (57) “Magnetic Blocking and Large Coercivity in Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Seminar, Department of Physics, University of Central Florida, Orlando, Florida, USA, April 5, **2019** (talk). *Invited*.
- (56) “Magnetic Blocking and Coercivity in Lanthanide Single-Molecule Magnets” **Selvan Demir**, Florian Benner, Christina M. Legendre, 257th ACS National Meeting & Exposition, *Symposium: Magnetism Across Length Scales*, MAGNA-2019, Orlando, Florida, USA, March 31 to April 4, **2019** (talk). *Invited*.
In addition, *chairwoman* on April 4, **2019**.
- (55) “Employing Radical-Ligands in Lanthanide-Based Single-Molecule Magnet Design” **Selvan Demir**, Christina M. Legendre, Florian Benner, 257th ACS National Meeting & Exposition, *Symposium: F. Albert Cotton Award in Synthetic Inorganic Chemistry: Symposium in Honor of Jeffrey R. Long*, Orlando, Florida, USA, March 31 to April 4, **2019** (talk). *Invited*.
- (54) “Employing Radical-Ligands in Lanthanide-Based Single-Molecule Magnet Design” **Selvan Demir**, 1st Workshop on Luminescence & Magnetism in Molecules & Materials (*LM³*), University of Ottawa, Ottawa, Canada, March 11, **2019** (talk). *Invited*.
- (53) “Radical-Bridged Lanthanide Single-Molecule Magnets” **Selvan Demir**, 9th International Conference on Advanced Materials and Nanotechnology (AMN9), Session: *Materials Synthesis and Characterization*, Wellington, New Zealand, February 10-14, **2019** (talk).
- (52) “Employing Radical Ligands in Lanthanide-Based Single-Molecule Magnet Design” **Selvan Demir**, Seminar, Department of Chemistry, University of Barcelona, Barcelona, Spain, December 14, **2018** (talk). *Invited*.
- (51) “Magnetic Blocking and Large Coercivity in Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Seminar, Instituto de Ciencia de Materiales de Aragón, University of Zaragoza, Zaragoza, Spain, December 12, **2018** (talk). *Invited*.

Selvan Demir

- (50) “Perspectives on the SMM dysprosocenium dichotomy– let’s do good science and work together!” **Selvan Demir**, Workshop within the framework of the Karlsruhe/Freiburg “Schauinsland” Meetings – Venue, Karlsruhe Institute of Technology, Karlsruhe, Germany, November 28, **2018** (talk). *Invited*.
- (49) “Magnetic Blocking and Large Coercivity in Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Materials Chemistry Talk, University of Cambridge, Cambridge, United Kingdom, November 8, **2018** (talk). *Invited*.
- (48) “Employing Radical-Ligands in Lanthanide-Based Single-Molecule Magnet Design” **Selvan Demir**, Chemistry Seminar, University of Copenhagen, Copenhagen, Denmark, November 2, **2018** (talk). *Invited*.
- (47) “Employing Radical-Ligands in Lanthanide-Based Single-Molecule Magnet Design” **Selvan Demir**, Chemistry Seminar, Denmark Technical University, Lyngby, Denmark, November 1, **2018** (talk). *Invited*.
- (46) “Large Coercivity and High Magnetic Blocking Temperatures for Lanthanide Complexes” **Selvan Demir**, ECMoS 2018, 2nd European Conference on Molecular Spintronics, Peniscola, Castelló, Spain, October 21-24, **2018** (poster).
- (45) “Giant Coercivity and High Magnetic Blocking Temperatures for Radical-Bridged Lanthanide Complexes” **Selvan Demir**, Institute of Molecular Science (ICMol), University of Valencia, Valencia, Spain, October 19, **2018** (talk). *Invited*.
- (44) “Giant Coercivity and High Magnetic Blocking Temperatures For Radical-Bridged Lanthanide Complexes” **Selvan Demir**, M3E-CL, The Multifunctional Materials based on Strategic Metals Meeting, GAM, Santiago, Chile, September, 6-8, **2018** (talk). *Invited*.
- (43) “Giant Coercivity and High Magnetic Blocking Temperatures for N₂³⁻ Radical-Bridged Metallocene Complexes” **Selvan Demir**, Jeffrey R. Long, 16th International Conference on Molecule-based Magnets – ICMM2018, Rio, Brazil, September 1-5, **2018** (poster).
- (42) “Giant Coercivity and High Magnetic Blocking Temperatures for N₂³⁻ Radical-Bridged Metallocene Complexes” **Selvan Demir**, Rising star ICMM2018 Pre-Conference, 16th International Conference on Molecule-based Magnets – ICMM2018, Rio, Brazil, September 1, **2018** (talk). *Invited*.
- (41) “Large coercivity and high magnetic blocking temperatures for radical-bridged lanthanide metallocene complexes” **Selvan Demir**, Kumamoto Symposium on Advanced Supramolecular Materials Post ICC, Kumamoto, Japan, August 6, **2018** (talk). *Invited*.
- (40) “Large coercivity and high magnetic blocking temperatures for radical-bridged lanthanide metallocene complexes” **Selvan Demir**, ICC2018, 43rd International Conference on Coordination Chemistry, Sendai, Japan, August 3, **2018** (talk). *Invited*.
In addition, *chairwoman (invited)* for plenary speaker Prof. Mario Ruben (KIT, Université de Strasbourg) “Quantum Computing with Metal complexes”, Sendai, Japan, August 6, **2018**.
- (39) “Employing Radical-Bridging Ligands in Lanthanide Single-Molecule Magnet Design” **Selvan Demir**, Chemisches Kolloquium, GDCh-Kolloquium, Paderborn University, Paderborn, Germany, July 9, **2018** (talk). *Invited*.
- (38) “Large Coercivity and High Magnetic Blocking Temperatures for Radical-Bridged Lanthanide Complexes” **Selvan Demir**, HeKKSaGOn 6th Japanese-German University Presidents’ Conference,

Selvan Demir

Session no.2: *Coordination Chemistry for Energy Conversion, Catalysis and Nanotechnology*, Osaka University, Osaka, Japan, April 13, **2018** (talk). *Invited*.

- (37) “Large Coercivity and Magnetic Blocking in Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Seminar, Michigan State University, East Lansing, MI, USA, January 11, **2018** (talk). *Invited*.
- (36) “Large Coercivity and Magnetic Blocking in Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Seminar, Rutgers University-Newark, Newark, NJ, USA, December 14, **2017** (talk). *Invited*.
- (35) “Magnetic Blocking and Coercivity in Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, LAC Minisymposium, ETH Zürich, Zürich, Switzerland, November 13, **2017** (talk). *Invited*.
- (34) “Magnetic Blocking in Radical-Bridged Lanthanide Complexes” **Selvan Demir**, LOT-Quantum Design, Cryo- and magnetometry day 2017, Darmstadt, Germany, October 11, **2017** (talk). *Invited*.
- (33) “Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Special Seminar, University of Michigan, Ann Arbor, MI, USA, September 8, **2017** (talk). *Invited*.
- (32) “Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, CORE-CM Seminar (Center of Research Excellence in Complex Materials Seminar), Michigan State University, East Lansing, MI, USA, September 7, **2017** (talk). *Invited*.
- (31) “Radical-Bridged Lanthanide Single-Molecule Magnets” **Selvan Demir**, Jeffrey R. Long, European Conference of Molecular Magnets, Bucharest, Romania, August 27-31, **2017** (talk).
- (30) “Lanthanide-Based Single-Molecule Magnets with High Blocking Temperatures” **Selvan Demir**, Inorganic Chemistry Seminar, FAU Erlangen-Nürnberg, Germany, June 19, **2017** (talk). *Invited*.
- (29) “Lanthanide-Based Single-Molecule Magnets with High Blocking Temperatures” **Selvan Demir**, Inorganic Chemistry Seminar, RWTH Aachen University, Germany, June 2, **2017** (talk). *Invited*.
- (28) “Radical-Bridged Lanthanide Single-Molecule Magnets with High Blocking Temperatures” **Selvan Demir**, Jeffrey R. Long, 253rd ACS National Meeting & Exposition, San Francisco, CA, USA, April 2-6, **2017** (talk). In addition, *chairwoman* with Drs. Jordan Corbey and Louise Natrajan in the “Lanthanide and Actinide Chemistry - AM Session”.
- (27) "Radical-bridged lanthanide single-molecule magnets" **Selvan Demir**, Mini-Symposium "Using Anisotropic 3d, 4f and 5f in SMMs - Theory and Practice", Karlsruhe Institute of Nanotechnology, Germany, January 24, **2017** (talk). *Invited*.
- (26) “Lanthanide-Based Single-Molecule Magnets with High Blocking Temperatures” **Selvan Demir**, Inorganic-Organic Chemistry Seminar, Karlsruhe Institute of Technology, Germany, January 23, **2017** (talk). *Invited*.
- (25) “The Versatility of Rare-Earth Metallocene Complexes: From Radical Ligand-Containing Single-Molecule Magnets to Reactivity Studies” **Selvan Demir**, Inorganic Chemistry Seminar, Iowa State University, Ames, Iowa, USA, January 12, **2017** (talk). *Invited*.

Selvan Demir

- (24) “*f*-Element Single-Molecule Magnets” **Selvan Demir**, GDCh Weihnachtsskolloquium, Göttingen, Germany, December 15, **2016** (talk). *Invited*.
- (23) “Lanthanide-Based Single-Molecule Magnets with High Blocking Temperatures” **Selvan Demir**, Miguel I. Gonzalez, Jeffrey R. Long, ICMM 2016 - The 15th International Conference on Molecule-based Magnets, Sendai, Japan, September 4–8, **2016** (poster).
- (22) “Bottom-Up Approach to Multinuclear Strongly Exchange-Coupled Single-Molecule Magnets” **Selvan Demir**, Göttinger Chemie-Forum, Göttingen, Germany, June 21, **2016** (talk). *Invited*.
- (21) “Bottom-Up Approach to Multinuclear Strongly Exchange-Coupled Single-Molecule Magnets” **Selvan Demir**, Daimler und Benz Stiftung, Ladenburg, Germany, January 21, **2016** (talk). *Invited*.
- (20) “Lanthanide-Based Single-Molecule Magnets with High Blocking Temperatures” **Selvan Demir**, SFB Seminar, University of Göttingen, Göttingen, Germany, November 20, **2015** (talk). *Invited*.
- (19) “Strong Exchange Coupling in Radical-Bridged Dilanthanide Complexes” **Selvan Demir**, Miguel I. Gonzalez, Joseph M. Zadrozny, Michael Nippe, Jeffrey R. Long, 250th ACS National Meeting, Boston, MA, USA, August 16-20, **2015** (talk).
- (18) “Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Inorganic Chemistry Seminar, Kaiserslautern University of Technology, Germany, July 10th, **2015** (talk). *Invited*.
- (17) “Exchange-Coupling in Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Seminar, Helmholtz Zentrum Berlin, Germany, June 30, **2015** (talk). *Invited*.
- (16) “Employing Organic Radicals in Single-Molecule Magnet Design” **Selvan Demir**, Seminar, University of Kent, Canterbury, UK, April 8, **2015** (talk). *Invited*.
- (15) “The Versatility of Rare-Earth Metallocene Complexes: From Exchange-Coupled Single-Molecule Magnets to Reactivity Studies” **Selvan Demir**, Seminar, University of Göttingen, Göttingen, Germany, March 26, **2015** (talk). *Invited*.
- (14) “Metal Ion Separation with Porous Aromatic Framework Polymers” **Selvan Demir**, Nicholas K. Brune, Jeffrey van Humbeck, Jarad A. Mason, David K. Shuh, Jeffrey R. Long, Department of Energy Review, Lawrence Berkeley National Laboratory, March 10, **2015** (poster).
- (13) “Lanthanide-Based Single-Molecule Magnets and Reactivity Studies of Scandium Metallocene Complexes” **Selvan Demir**, Seminar, Utah State University, Logan, UT, USA, January 26th, **2015** (talk). *Invited*.
- (12) “Lanthanide-Based Single-Molecule Magnets and Scandium Metallocene Chemistry” **Selvan Demir**, Seminar, Cornell University, Ithaca, NY, USA, November 20th, **2014** (talk). *Invited*.
- (11) “Radical-Bridged Lanthanide Single-Molecule Magnets” **Selvan Demir**, Joseph M. Zadrozny, Michael Nippe, Jeffrey R. Long, 248th ACS National Meeting & Exposition, San Francisco, CA, USA, August

Selvan Demir

- 10-14, **2014** (talk). In addition, *presider* with Prof. Eric Schelter in the “Lanthanide and Actinide Chemistry - AM Session”.
- (10) “Magnetic Blocking in Lanthanide Single-Molecule Magnets” **Selvan Demir**, Joseph M. Zadrozny, Michael Nippe, Jeffrey R. Long, 27th Rare Earth Research Conference 2014, Squaw Valley, CA, Reno-Tahoe Region, USA, June 22-26, **2014** (talk).
- (9) “Lanthanide-Based Single-Molecule Magnets” **Selvan Demir**, Joseph M. Zadrozny, Michael Nippe, Jeffrey R. Long, Gordon Research Conference on Inorganic Chemistry, Theme: *Enabling Tomorrow's Technologies*, University of New England, Biddeford, ME, USA, June 8-13, **2014** (poster presentation).
- (8) “Manipulation of the exchange coupling in dilanthanide radical-bridged complexes” **Selvan Demir**, Joseph M. Zadrozny, Michael Nippe, Jeffrey R. Long, 246th ACS National Meeting & Exposition, Indianapolis, Indiana, USA, September 8-12, **2013** (talk).
- (7) “Zero-field slow magnetic relaxation in radical-bridged dilanthanide complexes” **Selvan Demir**, Joseph M. Zadrozny, Michael Nippe, Jeffrey R. Long, 245th ACS National Meeting & Exposition, New Orleans, Louisiana, USA, April 7–11, **2013** (talk).
- (6) “Exchange Coupling and Magnetic Blocking in Radical-Bridged Lanthanide Complexes“ **Selvan Demir**, Joseph M. Zadrozny, Michael Nippe, Jeffrey R. Long, ICMM 2012 - The 13th International Conference on Molecule-based Magnets, Orlando, Florida, USA, October 7–11, **2012** (talk).
- (5) “Scandium Nitrogen Chemistry: Synthesis of the Elusive Scandium Dinitrogen Complex, [(C₅Me₄H)₂Sc]₂(μ-η²:η²-N₂) and Reactivity Studies of {Sc₆C}ScI₁₂ Leading to a Nitride” **Selvan Demir**, Joseph W. Ziller, Gerd Meyer, and William J. Evans, XXIII - Tage der Seltenen Erden - Terrae Rarae 2010, Bayreuth, Germany, October 6–8, **2010** (talk).
- (4) “Synthesis, Structure and Reactivity of Scandocenes” **Selvan Demir**, Anorganisch-Chemisches Kolloquium (Inorganic Seminar), University of Cologne, Cologne, June 30, **2010** (talk).
- (3) “Excision of Scandium Clusters: From the Solid State into Solution“ **Selvan Demir** and Gerd Meyer, XXI - Tage der Seltenen Erden - Terrae Rarae 2008, Bochum, Germany, December 4–6, **2008** (poster, poster award).
- (2) “Zwei Modifikationen von [Sc(dma)₆]I₃ - Two modifications of [Sc(dma)₆]I₃” **Selvan Demir** and Gerd Meyer, 16. Jahrestagung der Deutschen Gesellschaft für Kristallographie, Erlangen, Germany, March 3–6, **2008** (poster).
- (1) “Sc{Sc₆C}I₁₂ - a rare-earth metal cluster and its behaviour in solvents” **Selvan Demir** and Gerd Meyer, XX - Tage der Seltenen Erden - Terrae Rarae 2007, Bonn - Röttgen, Germany, November 29 – December 1, **2007** (poster).

Professional Activity

Review Panels, National Science Foundation

1/2019-present

Selvan Demir

Journal Reviewer, Reviewer for the following 22 journals: 12/2015-present
ACS Central Science, ACS Omega, Angewandte Chemie International Edition, Australian Journal of Chemistry, Chem, Chemical Communications, Chemical Reviews, Chemical Science, Chemical Society Reviews, Crystal Growth & Design, Dalton Transactions, Inorganic Chemistry, Inorganic Chemistry Frontiers, Inorganica Chimica Acta, Journal of the American Chemical Society, Magnetochemistry, Molecules, Nature Chemistry, Nature Communications, Organometallics, Polyhedron, Zeitschrift für Anorganische und Allgemeine Chemie

Invited Organizer of Conferences / Symposia 7/2019-present

- (1) *Invited* to Molecular Magnetism in North America (MAGNA) Conference Organizing Committee by Prof. George Christou, University of Florida, USA. Co-organizing MAGNA conference, May 1-4, **2022**, Georgia, USA.
- (2) *Invited* to serve as GMAG Focus Topic (FT) organizer by Dr. Julie A. Borchers, NIST Center for Neutron Research, USA: Organized 10.1.8 Low-Dimensional and Molecular Magnetism (GMAG/DMP) at American Physical Society (APS) March Meeting, March 15-19, **2021**, Nashville, Tennessee, USA. **Online conference due to Coronavirus (COVID-19).**
- (3) *Invited* to serve as GMAG Focus Topic (FT) organizer by Prof. Geoffrey S. D. Beach, MIT, USA: Organized 10.1.8 Low-Dimensional and Molecular Magnetism (GMAG/DMP) at American Physical Society (APS) March Meeting, March 2-6, **2020**, Denver, USA.
- (4) *Invited* to Molecular Magnetism in North America (MAGNA) Conference Organizing Committee by Prof. George Christou, University of Florida, USA. Co-organized MAGNA conference, Feb 21-24, **2020**, Georgia, USA.
- (5) *Invited* to be organizer of session #224, “Molecular Spintronics Based on Coordination Chemistry” at Pacifichem 2020, Dec 19-20, **2020**, by Prof. Masahiro Yamashita, University of Tohoku, Japan. Currently organizing the session.
- (6) *Invited* to be organizer of session #232, “Advanced Multifunctional Molecular Materials Based on Dynamic Spin” at Pacifichem 2020, Dec 18, **2020**, by Prof. Shinya Hayami, University of Kumamoto, Japan. Currently organizing the session.
- (7) Scientific Committee Member of International Symposium on Nano- and Supramolecular Chemistry 1/2020-present
Scientific Committee Member of 12th ISNSC, July 4-7, **2021**, Poznan, Poland.

Chairwoman / Presider / Discussion Leader at Conferences/Symposia (10 invited)

- (10) Low-Dimensional and Molecular Magnetism (GMAG/DMP) at American Physical Society (APS) March Meeting, March 15-19, **2021**, Nashville, Tennessee, USA. Virtual; Time Zone: Central Daylight Time, USA. *Chair (invited)* of Session M39: Single-Molecule Magnets and Qubits: <https://meetings.aps.org/Meeting/MAR21/Session/M39>. *Chair (invited)* of Session S39: Molecular Magnets: <https://meetings.aps.org/Meeting/MAR21/Session/S39>. **Online conference due to Coronavirus (COVID-19).**
- (9) Discussion Leader (*invited*) at Organometallic Chemistry, Gordon Research Conference in Newport, Rhode Island, USA, July 12-17, 2020: <https://www.grc.org/organometallic-chemistry-conference/2020/>
Entire meeting withdrawn due to Coronavirus (COVID-19) and rescheduled for 2022.

Selvan Demir

- (8) Low-Dimensional and Molecular Magnetism (GMAG/DMP) at American Physical Society (APS) March Meeting, March 2-6, **2020**, Denver, USA. *Chair (invited)* of Session W46: Low-Dimensional Magnetism and Single-Molecule Magnets <http://meetings.aps.org/Meeting/MAR20/Session/W46>. *Chair (invited)* of Session J46: Single-Molecule Magnets: <http://meetings.aps.org/Meeting/MAR20/Session/J46>
Entire meeting cancelled due to Coronavirus (COVID-19).
- (7) Molecular Magnetism in North America (MAGNA) Conference, St. Simons Island, Georgia, USA, February 21-24, **2020**. *Chairwoman (invited)* in second afternoon session on February 22nd, **2020**.
- (6) The 11th International Symposium on Nano & Supramolecular Chemistry (ISNSC–11) & The 3rd Forum on Industrial Materials (WFIM–3), Qing Yang, Chi Zhou City, China, October 12-16, **2019**. *Chairwoman (invited)* in session for student oral presentations on October 14th, **2019**.
- (5) Phase Transition and Dynamical Properties of Spin Transition Materials (PDSTM) **2019**, Gainesville, Florida, USA, May 6-10, **2019**. *Session Chair (invited)* on May 9th, **2019**.
- (4) 257th ACS National Meeting & Exposition, *Symposium: Magnetism Across Length Scales*, MAGNA-2019, Orlando, Florida, USA, March 31 to April 4, **2019**. *Chairwoman (invited)* on April 4, **2019**.
- (3) ICC2018, 43rd International Conference on Coordination Chemistry, Sendai, Japan, August 3, **2018**. *Chairwoman (invited)* for plenary speaker Prof. Mario Ruben (KIT, Université de Strasbourg) “Quantum Computing with Metal complexes”, Sendai, Japan, August 6, **2018**.
- (2) 253rd ACS National Meeting & Exposition, San Francisco, CA, USA, April 2-6, **2017**. *Chairwoman (invited)* with Drs. Jordan Corbey and Louise Natrajan in the “Lanthanide and Actinide Chemistry - AM Session”.
- (1) 248th ACS National Meeting & Exposition, San Francisco, CA, USA, August 10-14, **2014**. *Presider (invited)* with Prof. Eric Schelter in the “Lanthanide and Actinide Chemistry - AM Session”.

University Service and Committee

since 1/2016

Treasurer (since 8/2020) MSU Local Section of the American Chemical Society
Chair-elect (2019) and Chair (2020) of MSU Local Section of the American Chemical Society
Inorganic Chemistry Seminar Coordinator (MSU, 2019-present)
Colloquium Committee at Department of Chemistry at MSU (2019-present)
Graduate Affairs (Admissions/Advising) Committee at MSU (2019-present)
Inorganic Chemistry Seminar Coordinator (University of Göttingen, 2016-2018)

Memberships

Member of the Midwest Quantum Collaboratory (10/2021-present)
Experimental Quantum Information Science (QIS) faculty of the MSU Center for Quantum Computing, Science, and Engineering (2/2020-present)
American Chemical Society (ACS) (1/2013-present)
American Physical Society (APS) (2/2020-present)
German Chemical Society (GDCh) (12/2015-present)
Center for Gas Separations Relevant to Clean Energy Technologies (CGS) (2014-2015)

Selvan Demir

Language Skills

German (Fluent), English (Fluent), Turkish (Fluent), French (Basics), Spanish (Basics)

Expertise

Air- & moisture-free synthesis techniques: glove box, Schlenk line, high vacuum line, high temperature oven

Characterization techniques:

SQUID magnetometry (MPMS-XL, MPMS3 and PPMS),

(¹H, ¹³C, ¹¹B, ¹⁹F, ⁴⁵Sc, ⁸⁹Y) NMR spectroscopy

EPR (continuous wave and pulsed) spectroscopy,

IR, Raman and UV-Vis spectroscopy,

MS, ICP-MS, EA, TGA,

XRD, X-ray crystallography, small molecule crystallography at advanced light source (ALS), EDX,

cyclic voltammetry,

GC, HPLC, thin layer and column chromatography,

DFT, NBO, NICS calculations

Computer Skills: Microsoft-Office (Word, Excel, PowerPoint), Diamond, Origin, Sigmaplot, ChemDraw, TopSpin, SciFinder, Conquest, Olex2, Endnote, Adobe Professional, Gaussian, Gaussview, Phi, Magellan

Current Research Interests

Strong emphasis on lanthanide and actinide chemistry:

a) small molecule activation, b) organic radicals, c) single-molecule and single-chain magnets, d) molecular lanthanide qubits and organic qubits, e) activation of heavy p-block elements bismuth, f) dibenzocyclooctatetraene and salophen chemistry, and g) separation of lanthanides and actinides.