

| | |
|-------------------------|--|
| 1. Record Nr. | UNINA9910765779103321 |
| Titolo | Rare Earth and actinide complexes // edited by Stephen Mansell, Steve Liddle |
| Pubbl/distr/stampa | Basel, Switzerland : , : MDPI - Multidisciplinary Digital Publishing Institute, , [2017] ©2017 |
| Descrizione fisica | 1 online resource (264 pages) |
| Disciplina | 546.42 |
| Soggetti | Actinide elements |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | About the Guest Editors V -- Editorial to "Rare Earth and Actinide Complexes" -- Reprinted from: Inorganics 2016, 4(4), 31; doi:10.3390/inorganics4040031 -- http://www.mdpi.com/2304-6740/4/4/31 . VII -- Catalytic Organic Transformations Mediated by Actinide Complexes -- Reprinted from: Inorganics 2015, 3(4), 392-428; doi:10.3390/inorganics3040392 -- http://www.mdpi.com/2304-6740/3/4/392 . 1 -- Molecular Pnictogen Activation by Rare Earth and Actinide Complexes -- Reprinted from: Inorganics 2015, 3(4), 597-635; doi: 10.3390/inorganics3040597 -- http://www.mdpi.com/2304-6740/3/4/597 . 34 -- New Lanthanide Alkynylamidates and Diiminophosphinates -- Reprinted from: Inorganics 2015, 3(4), 429-447; doi:10.3390/inorganics3040429 -- http://www.mdpi.com/2304-6740/3/4/429 66 -- Dinuclear Lanthanide (III) Coordination Polymers in a Domino Reaction -- Reprinted from: Inorganics 2015, 3(4), 448-466; doi:10.3390/inorganics3040448 -- http://www.mdpi.com/2304-6740/3/4/448 82 -- Luminescent Lanthanide Metal Organic Frameworks for cis-Selective Isoprene Polymerization Catalysis -- Reprinted from: Inorganics 2015, 3(4), 467-481; doi:10.3390/inorganics3040467 -- http://www.mdpi.com/2304-6740/3/4/467 98 -- Assessing Covalency in Cerium and Uranium Hexachlorides: A Correlated Wavefunction and Density Functional Theory Study -- Reprinted from: Inorganics 2015, 3(4), 482-499; doi: 10.3390 |

/inorganics3040482 -- <http://www.mdpi.com/2304-6740/3/4/482>.
110 -- Holmium(III) Supermesityl-Imide Complexes Bearing Methylaluminato/Gallato Ligands -- Reprinted from: *Inorganics* 2015, 3(4), 500-510; doi:10.3390/inorganics3040500 -- <http://www.mdpi.com/2304-6740/3/4/500> 125 -- Gadolinium(III)-DOTA Complex Functionalized with BODIPY as a Potential Bimodal Contrast Agent for MRI and Optical Imaging -- Reprinted from: *Inorganics* 2015, 3(4), 516-533; doi:10.3390/inorganics3040516 -- <http://www.mdpi.com/2304-6740/3/4/516> 133 -- Synthesis and Reactivity of a Cerium(III) Scorpionate Complex Containing a Redox Non-Innocent 2,2'-bipyridine Ligand -- Reprinted from: *Inorganics* 2015, 3(4), 534-553; doi:10.3390/inorganics3040534 -- <http://www.mdpi.com/2304-6740/3/4/534>. 148 -- Magnetic and Photo-Physical Properties of Lanthanide Dinuclear Complexes Involving the 4,5-Bis(2-Pyridyl-N-Oxidemethylthio)-4',5'-Dicarboxylic Acid-Tetrathiafulvalene-, Dimethyl Ester Ligand -- Reprinted from: *Inorganics* 2015, 3(4), 554-572; doi:10.3390/inorganics3040554 -- <http://www.mdpi.com/2304-6740/3/4/554>. 165 -- On the Dehydrocoupling of Alkenylacetylenes Mediated by Various Samarocene Complexes: A Charming Story of Metal Cooperativity Revealing a Novel Dual Metal σ -Bond Metathesis Type of Mechanism (DMI-BM) -- Reprinted from: *Inorganics* 2015, 3(4), 573-588; doi:10.3390/inorganics3040573 -- <http://www.mdpi.com/2304-6740/3/4/573> 181 -- Synthesis and Characterization of Cerium(IV) Metallocenes -- Reprinted from: *Inorganics* 2015, 3(4), 589-596; doi:10.3390/inorganics3040589 -- <http://www.mdpi.com/2304-6740/3/4/589> 194 -- Expanding the Chemistry of Actinide Metallocene Bromides. Synthesis, Properties and Molecular Structures of the Tetravalent and Trivalent Uranium Bromide Complexes: (CsMe \langle R):U \langle Br \rangle 2, -- (CsMe \langle R) U(O-2,6-Pr \rangle 2CH \rangle 3)(Br), and [K(THF)][(CsMe \langle R):U \langle Br \rangle 2] (R = Me, Et) -- Reprinted from: *Inorganics* 2016, 4(1), 1; doi:10.3390/inorganics4010001 -- <http://www.mdpi.com/2304-6740/4/1/1>. 200 -- Tuning of Hula-Hoop Coordination Geometry in a Dy Dimer -- Reprinted from: *Inorganics* 2016, 4(1), 2; doi:10.3390/inorganics-4010002 -- <http://www.mdpi.com/2304-6740/4/1/2> 217 -- A Structural and Spectroscopic Study of the First Uranyl Selenocyanate, [EN]:[UO:(NCSe) \rangle s] -- Reprinted from: *Inorganics* 2016, 4(1), 4; doi:10.3390/inorganics4010004 -- <http://www.mdpi.com/2304-6740/4/1/4> 227 -- Optical Properties of Heavily Fluorinated Lanthanide Tris -Diketonate Phosphine Oxide Adducts -- Reprinted from: *Inorganics* 2016, 4(3), 27; doi:10.3390/inorganics4030027 -- <http://www.mdpi.com/2304-6740/4/3/27> -- 235.

Sommario/riassunto

As the fields of organometallic and coordination chemistry of the transition metals has grown more mature, the under-explored chemistry of the rare-earths and actinides has drawn the attention of research groups from across the globe looking for new fundamental discoveries and access to compounds with unique properties. The rare-earths--the group 3 metals and the 4f lanthanide series--have long shown many interesting properties in the solid state which exploit their unique electronic configurations. However, it is the molecular chemistry of these metals that has expanded dramatically in recent years as researchers identify the differences between--and unique features of--their molecular compounds. Recent highlights include the identification of new oxidation states and patterns of reactivity as well as applications in medical imaging and health care which represent new and exciting areas of research. The actinides show a wide range of different properties as a consequence of their radioactivity and radiochemistry, but this has not stopped recent rapid progress into the exploration of

their unique chemistry. Uranium, in particular, shows huge potential with its transition metal-like range of oxidation states (+2 to +6), and in specialised laboratories, the heavier actinides are also beginning to show their unique chemistry. This Special Issue aims to bring together these strands of research in an openly-accessible way to allow better communication of these advances to a wider audience. This is necessary as, despite these exciting advances, the rare-earths and actinides are still much neglected topics in both school and undergraduate curriculums. Contributions in the above-mentioned areas will allow new research in the rare-earths and actinides to inform and influence the next generation of scientists and keep the field as vibrant as it is today.
