1. Record Nr. UNINA9910779071203321

Titolo	Molecular cluster magnets [[electronic resource] /] / editor, Richard Winpenny
Pubbl/distr/stampa	Singapore ; ; Hackensack, N.J., : World Scientific Pub., c2012
ISBN	981-4322-95-4
Descrizione fisica	1 online resource (312 p.)
Collana	World Scientific series in nanoscience and nanotechnology ; ; v. 3
Altri autori (Persone)	WinpennyRichard
Disciplina	541.378
Soggetti	Nanostructured materials - Magnetic properties Magnetochemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	3 Further SMMs Based on Mn(III)3.1 The largest SMM; a [Mn84] torus; 3.2 Record spin number, ST = 83/2, but no slow relaxation; 3.3 Record magnetic anisotropy barrier; a Mn6 cluster; 3.4 Quantum entanglement between SMMs; first discovered in a pair of Mn4 clusters; 3.5 [MnIII 3 MnIV] clusters with an S = 9/2 ground state; 3.6 The [MnIII 2 MnII 2] family of "rhombic" SMMs; 3.7 Oxime bridged SMMs with the core [MnIII 3 O] and ST = 6; 3.8 Magnetostructural correlations within a family of [MnIII 6] SMMs; 4 MMs Based on Fe(III) Ions; 5 New SMMs Based on Divalent 3d-Ions 6 Slow Relaxation in Complexes Involving 4f-Elements6.1 Single atom magnets; 6.2 Polymetallic 4f-complexes; 6.3 Heterometallic 3d-4f SMMs; 7 Metallocyanate Based SMMs; 8 Conclusions; References; 3. The Nanoscopic V15 Cluster: A Unique Magnetic Polyoxometalate Boris Tsukerblat and Alex Tarantul; 1 The Unique Magnetic Polyoxometalate V15; 2 Structure and Superexchange Pathways; 3 Exchange Interactions within the Triangle Model; 3.1 Isotropic exchange within the triangle model; 3.2 'Accidental' degeneracy and spin-frustration; 3.3 Pseudo-angular momentum representation 3.4 Antisymmetric exchange, zero-field splitting
Sommario/riassunto	This work covers new developments in the field of molecular nanomagnetism, complementing previous books in this area (for example the volume by Gatteschi, Sessoli and Villain on Single Molecule

Magnets). The book is written by experts in the field and is intended as a compilation of critical reviews of new areas rather than a comprehensive text.