Record Nr. UNINA9910787568403321 Titolo Magnetic nanoparticle assemblies / / edited by Kalliopi N. Trohidou Boca Raton:,: CRC Press,, [2015] Pubbl/distr/stampa ©2015 **ISBN** 0-429-08982-1 981-4411-96-5 Descrizione fisica 1 online resource (301 p.) 612.028 Disciplina Soggetti Tissue engineering Nanoparticles - Magnetic properties Stem cells Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references at the end of each chapters. Nota di bibliografia Nota di contenuto Front Cover; Contents; Preface; Chapter 1 - Biogenic and Biomimetic Magnetic Nanoparticles and Their Assemblies: Chapter 2 - Controlling the Structure and Properties of Nanostructured Magnetic Materials Produced by Depositing Gas-Phase Nanoparticles; Chapter 3 - Time-Dependent Phenomena in Nanoparticle Assemblies; Chapter 4 -Elementary Excitations in Magnetic Nanoparticles Probed with 57Fe Nuclear Magnetic Resonance and Mossbauer Spectroscopy; Chapter 5 -Magnetic Properties of Spinel Ferrite Nanoparticles: Influence of the Magnetic Structure Chapter 6 - FePt Films with Graded Anisotropy for Magnetic RecordingChapter 7 - Fabrication of Patterned Nanoparticle Assemblies via Lithography; Chapter 8 - Magnetic Behavior of Composite Nanoparticle Assemblies; Back Cover Sommario/riassunto Magnetic nanoparticles with diameters in the range of a few nanometers are today at the cutting edge of modern technology and innovation because of their use in numerous applications ranging from engineering to biomedicine. A great deal of scientific interest has been focused on the functionalization of magnetic nanoparticle assemblies.

> The understanding of interparticle interactions is necessary to clarify the physics of these assemblies and their use in the development of

high-performance magnetic materials. This book reviews prominent research studies on the static and dynamic magnetic prope