1. Record Nr. UNINA9910958636603321

Titolo	Challenges in characterizing small particles : exploring particles from the nano- to microscales : a workshop summary / / Tina Masciangioli and Joe Alper, rapporteurs ; Chemical Sciences Roundtable ; Board on Chemical Sciences and Technology ; Division on Earth and Life Studies ; National Research Council of the National Academies Press
Pubbl/distr/stampa	Washington, D.C., : National Academies Press, 2012
ISBN	9786613558169 9780309225939 0309225930 9781280380259 128038025X 9780309225915 0309225914
Edizione	[1st ed.]
Descrizione fisica	xiii, 85 p. : ill. (some col.)
Altri autori (Persone)	MasciangioliTina AlperJoe
Soggetti	Nanoparticles - Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Two columns to the page.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	FrontMatter -- Preface -- Acknowledgment of Reviewers -- Contents -- Acronyms -- 1 Overview -- 2 What Are Small Particles and Why Are They Important? -- 3 Analysis and Imaging of Small Particles -- 4 Analyzing Nanoparticles in Complex Mixtures -- 5 Modeling and Simulation of Small Particles -- 6 Workshop Wrap-up Session -- Appendixes -- A Workshop Agenda -- B Poster Abstracts -- C Participant Biographies -- D Workshop Attendees -- E Origin of and Information on the Chemical Sciences Roundtable -- F References.
Sommario/riassunto	Small particles are ubiquitous in the natural and built worlds and have tremendous impact throughout. However, a lack of understanding about the properties and chemical composition of small particles limits our ability to predict, and control their applications and impacts. Challenges in Characterizing Small Particles: Exploring Particles from

the Nano- to Microscales summarizes presentations and discussions at a 2010 National Academies roundtable. Speakers at this roundtable discussed the crucial types of information that need to be determined about small particles in different media. They also explored the critical importance of small particles in environmental science, materials and chemical sciences, biological science, and engineering, and the many challenges involved in characterizing materials at the nano- and microscales. The discussions on characterization included static, dynamic, experimental, computational, and theoretical characterization. The workshop also included several "research tool" presentations that highlighted new advances in characterizing small particles.