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Titolo	Nanoscience and Cultural Heritage [[electronic resource] /] / edited by Philippe Dillmann, Ludovic Bellot-Gurlet, Irène Nenner
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Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XVI, 311 p. 128 illus., 85 illus. in color.)
Disciplina	541.2
Soggetti	Nanochemistry Analytical chemistry Analytical Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Lustre and nanostructures - ancient technologies revisited -- Nano-crystallization in decorative layers of Greek and Roman ceramics -- Natural nanosized raw materials and Sol-Gel technology: the base of pottery since millenniums -- Informative potential of multiscale observations in archaeological biominerals down to nanoscale -- The science behind the daguerreotype: Nanometer and sub-micrometer realities on and beneath the surface -- Surface-enhanced Raman spectroscopy: using nanoparticles to detect trace amounts of colorants in works of art -- Nanoscale aspects of corrosion on cultural heritage metals. .
Sommario/riassunto	This book aims to give state of the art in several domains of cultural heritage in which Nanosciences allow fundamental breakthrough. The first part of the book concerns nanostructured materials in ancient artifacts. Understanding their nature and formation processes bring new insight in the apprehension of technical level of ancient societies but can also inspire the design of new materials. The second part is dedicated to the understanding of materials. This crucial issue in material science today, for cultural heritage, needs to perform specific characterization techniques and technologies, but also to create tailored analytical strategies. Part three presents new methods, processes and materials at nano levels that can bring innovative solutions to conservation and restoration issues, linked with the

understanding of the alteration processes involved at different scales.

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