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Titolo	Application of Light Scattering to Coatings : A User's Guide / / by Michael P. Diebold
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ISBN	3-319-12015-8
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (202 p.)
Disciplina	620.11 620.11223 621.89 660
Soggetti	Tribology Corrosion and anti-corrosives Coatings Materials science Engineering—Materials Chemical engineering Tribology, Corrosion and Coatings Characterization and Evaluation of Materials Materials Engineering Industrial Chemistry/Chemical Engineering
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.
Nota di contenuto	Scattering by a Single Particle -- Scattering by Groups of Particles -- The Kubelka-Munk Framework and Measuring Opacity -- TiO2 Pigments in Liquid Paints -- Effects of Extenders on Paint Optics below the CPVC -- Volume Relationships and the CPVC -- Effects of Extenders on Paint Optics above the CPVC -- Cost-Effective Paint Formulation.
Sommario/riassunto	The book begins with the fundamentals of light scattering, first by individual particles, then by small groups of particles, and finally by the trillions of particles present in a real-life paint film. From there, Dr.

Diebold focuses on application of these fundamentals to paint formulation. The scope includes both theory and practice with an emphasis on application (from both performance and cost standpoints). The book gives a clear understanding of light scattering principles and application of these principles to paint formulation (with a focus on TiO2 – the strongest scattering material available to paint formulators). The reader will be in a position to formulate and reformulate paints for maximum cost effectiveness. Application of Light Scattering to Coatings: A Users Guide is ideal for a range of professions working in paint formulation and manufacturing. This book also: · Distills difficult theories (light scattering, paint formulation) into easy-to-understand concepts · Adopts a qualitative perspective, with minimal use of complex equations, making key scientific concepts accessible to all paint formulators without a prerequisite of higher mathematics · Offers an accessible resource for formulators new to the field while maintaining a high degree of relevance to experienced coating formulators · Discusses the interplay between resin, TiO2 pigments, and paint extenders with regard to paint performance and cost · Presents an unbiased assessment of opacifying potential of TiO2 alternatives · Outlines strategies for minimizing overall costs of paints.