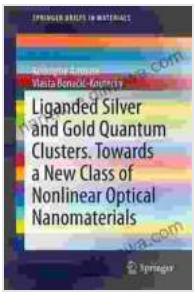
Liganded Silver and Gold Quantum Clusters: A New Class of Nonlinear Materials

Quantum clusters are small, atomically precise nanoparticles that exhibit unique properties due to their quantum confinement effects. Liganded silver and gold quantum clusters are of particular interest due to their strong nonlinear optical properties, which make them promising candidates for a variety of applications, including nonlinear optics, sensing, and catalysis.



Liganded silver and gold quantum clusters. Towards a new class of nonlinear optical nanomaterials (SpringerBriefs in Materials) by Collins Easy Learning

4.7 out of 5

Language	: English
File size	: 3627 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 137 pages

This book presents the latest research on the synthesis, characterization, and applications of liganded silver and gold quantum clusters. The book is divided into three parts:

1. Synthesis and characterization of liganded silver and gold quantum clusters

2. Nonlinear optical properties of liganded silver and gold quantum clusters
3. Applications of liganded silver and gold quantum clusters

Synthesis and characterization of liganded silver and gold quantum clusters

The first part of the book covers the synthesis and characterization of liganded silver and gold quantum clusters. The synthesis methods discussed include chemical reduction, electrochemical reduction, and laser ablation. The characterization techniques discussed include UV-Vis spectroscopy, fluorescence spectroscopy, and transmission electron microscopy.

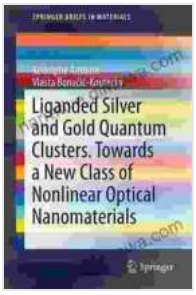
Nonlinear optical properties of liganded silver and gold quantum clusters

The second part of the book covers the nonlinear optical properties of liganded silver and gold quantum clusters. The nonlinear optical properties discussed include second harmonic generation, third harmonic generation, and four-wave mixing. The factors that affect the nonlinear optical properties of liganded silver and gold quantum clusters are also discussed.

Applications of liganded silver and gold quantum clusters

The third part of the book covers the applications of liganded silver and gold quantum clusters. The applications discussed include nonlinear optics, sensing, and catalysis. The book also discusses the challenges and opportunities for the future development of liganded silver and gold quantum clusters.

This book provides a comprehensive overview of the latest research on the synthesis, characterization, and applications of liganded silver and gold quantum clusters. The book is a valuable resource for researchers and students working in the field of quantum materials.



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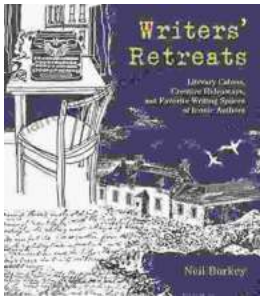

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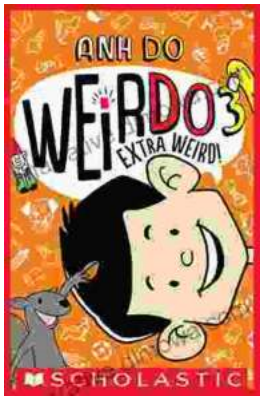

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