

1. Record Nr.	UNINA9910785109903321
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Titolo	Metallized DNA [[electronic resource]] : synthesis, analysis and properties // Nadine Kammerlander
Pubbl/distr/stampa	Hamburg [Germany], : Diplomica Verlag, 2009
ISBN	3-8366-2465-6
Descrizione fisica	1 online resource (111 p.)
Disciplina	572.8 572.8/69
Soggetti	Nanoparticles Nanochemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Cover title.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Metallized DNA; Abstract; Zusammenfassung; Contents; Chapter 1 Motivation; Chapter 2 Fundamentals; Chapter 3 Synthesis of Metallized DNA; Chapter 4 Absorption Spectrometry; Chapter 5 Dynamic Light Scattering; Chapter 6 Stabilization of the Nanoparticles; Chapter 7 Nanorings; Chapter 8 Atomic Force Microscopy; Chapter 9 Conclusion; Chapter 10 Outlook; Appendix; Bibliography
Sommario/riassunto	Metallic nanoparticles have been studied intensively during the last decades because of their intriguing optical properties: Due to collective oscillations of the conducting electrons - the so called plasmonic oscillations - they absorb light in the visible spectrum. The resonance frequency thereby sensitively depends on parameters such as the particle size and shape as well as the dielectric constant of the medium. DNA exhibits outstanding recognition properties and can be modified easily. Thus, template-directed material synthesis along synthetic DNA is a promising route to grow nanoparticle