

1. Record Nr.	UNINA9910155273803321
Autore	Patra Abhijeet
Titolo	Quantifying Interactions of Biomolecules with Inorganic Surfaces // by Abhijeet Patra
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	9783319307282
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XVIII, 102 p. 39 illus., 35 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	574.19283
Soggetti	Nanoscience Nanostructures Materials—Surfaces Thin films Amorphous substances Complex fluids Nanochemistry Physical measurements Measurement Nanoscale Science and Technology Surfaces and Interfaces, Thin Films Soft and Granular Matter, Complex Fluids and Microfluidics Measurement Science and Instrumentation
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	Introduction -- Methods -- Quantifying interactions between water and surfaces -- Quantifying interactions between lipids and surfaces -- Quantifying interactions between serum proteins and gold nanoparticles -- Conclusion.
Sommario/riassunto	This thesis demonstrates the adaptation of existing techniques and principles towards enabling clean and precise measurements of biomolecules interacting with inorganic surfaces. In particular, it includes real-time measurement of serum proteins interacting with

engineered nanomaterial. Making meaningful and unambiguous measurements has been an evolving problem in the field of biology and its various allied domains, primarily due to the complex nature of experiments and the large number of possible interferants. The subsequent quantification of interactions between biomolecules and inorganic surfaces solves pressing problems in the rapidly developing fields of lipidomics and nanomedicine.

---