

1. Record Nr.	UNINA9910300557603321
Titolo	Laboratory astrophysics // edited by Guillermo M. Muñoz Caro, Rafael Escribano
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-90020-X
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (237 pages)
Collana	Astrophysics and Space Science Library, , 0067-0057 ; ; 451
Disciplina	523.02
Soggetti	Astrophysics Planetary science Atoms Physics Spectrum analysis Astrophysics and Astroparticles Planetology Atomic, Molecular, Optical and Plasma Physics Spectroscopy/Spectrometry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Ice Properties -- Ice Processes -- Dust Grains and Plasmas -- Astrophysical Models.
Sommario/riassunto	This book focuses on the most recent, relevant, comprehensive and significant aspects in the well-established multidisciplinary field Laboratory Astrophysics. It focuses on astrophysical environments, which include asteroids, comets, the interstellar medium, and circumstellar and circumplanetary regions. Its scope lies between physics and chemistry, since it explores physical properties of the gas, ice, and dust present in those systems, as well as chemical reactions occurring in the gas phase, the bare dust surface, or in the ice bulk and its surface. The book provides adequate material to help interpret the observations, or the computer models of astrophysical environments. It introduces and describes the use of spectroscopic tools for laboratory astrophysics. Each chapter provides the necessary mathematical

background to understand the subject, followed by a case study of the corresponding system. This book is mainly addressed to PhD graduates working in this field or observers and modelers searching for information on ice and dust processes.
