Record Nr. UNINA9910830339603321 Impact cratering [[electronic resource]]: processes and products // **Titolo** edited by Gordon R. Osinski and Elisabetta Pierazzo Pubbl/distr/stampa Hoboken, N.J.,: Wiley-Blackwell, 2013 **ISBN** 1-118-44730-1 1-299-15776-9 1-118-44733-6 1-118-44732-8 Descrizione fisica 1 online resource (364 p.) Altri autori (Persone) OsinskiGordon R PierazzoElisabetta 551.21 Disciplina 551.3/97 551.397 Soggetti Impact craters Cratering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Title page; Copyright page; Dedication; Contents; Preface; List of contributors; ONE: Impact cratering: processes and products; 1.1 Introduction; 1.2 Formation of hypervelocity impact craters; 1.2.1 Contact and compression; 1.2.2 Excavation stage; 1.2.3 Modification stage; 1.2.4 Post-impact hydrothermal activity; 1.3 Morphology and morphometry of impact craters; 1.3.1 Simple craters; 1.3.2 Complex craters; 1.3.3 Multi-ring basins; 1.4 Impactites; 1.4.1 Classification of impactites; 1.4.2 Impact melt-bearing impactites; 1.5 Recognition of impact craters 1.6 Destructive effects of impact events 1.7 Beneficial effects of impact events; 1.7.1 Microbiological effects; 1.7.2 Economic effects; 1.8 When a crater does not exist: other evidence for impact events; 1.9 Concluding remarks; References; TWO: Population of impactors and the impact cratering rate in the inner Solar System; 2.1 Introduction; 2.2 Population of impactors in the inner Solar System; 2.3 Impact frequency

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## Sommario/riassunto

Impact cratering is arguably the most ubiquitous geological process in the Solar System. It has played an important role in Earth's history, shaping the geological landscape, affecting the evolution of life, and generating economic resources. However, it was only in the latter half of the 20th century that the importance of impact cratering as a geological process was recognized and only during the past couple of decades that the study of meteorite impact structures has moved into the mainstream. This book seeks to fill a critical gap in the literature by providing an overview text covering