1. Record Nr. UNINA9910416145603321 Autore Hoffmann Frank Titolo Introduction to Crystallography / / by Frank Hoffmann Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 3-030-35110-6 **ISBN** Edizione [1st ed. 2020.] 1 online resource (X, 309 p. 337 illus., 328 illus. in color.) Descrizione fisica 546 Disciplina 548 Soggetti Inorganic chemistry Crystallography Materials science Mineralogy Inorganic Chemistry Crystallography and Scattering Methods Characterization and Evaluation of Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto 1 Introduction -- 2 Crystal forms and Bravais lattices -- 3 Symmetry (is everywhere) -- 4 Symmetry in the plane - via wallpaper patterns, Islamic mosaics, pictures by Escher and heterogeneous catalysts -- 5 Translational symmetry elements in crystals and space groups I -- 6 Space Groups II - International Tables -- 7 Some Real Crystal Structures - From Theory to Practice -- 8 "Forbidden" Symmetry -- 9 Porous crystals, crystal structures as nets, and an insight into the crystallographic topology -- A Appendix. This book invites you on a systematic tour through the fascinating Sommario/riassunto world of crystals and their symmetries. The reader will gain an understanding of the symmetry of external crystal forms (morphology) and become acquainted with all the symmetry elements needed to classify and describe crystal structures. The book explains the context in a very vivid, non-mathematical way and captivates with clear, highquality illustrations. Online materials accompany the book; including

3D models the reader can explore on screen to aid in the spatial

understanding of the structure of crystals. After reading the book, you will not only know what a space group is and how to read the International Tables for Crystallography, but will also be able to interpret crystallographic specifications in specialist publications. If questions remain, you also have the opportunity to ask the author on the book's website.