1. Record Nr. UNINA9911018902803321 Autore Andre Jean-Michel Titolo X-Ray Radiation and Artificial Bragg Structures Pubbl/distr/stampa Newark:,: John Wiley & Sons, Incorporated,, 2025 ©2025 **ISBN** 9781394352012 1394352018 9781394352029 1394352026 9781394352005 139435200X Edizione [1st ed.] Descrizione fisica 1 online resource (272 pages) Collana ISTE Consignment Series Altri autori (Persone) **JonnardPhilippe** Disciplina 621.36 Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto The artificial Bragg structures (ABS) studied in this book have revolutionized X-ray optics. They are based on (quasi-) periodic stacks of nanoscale thin films with periods close to the wavelength of the radiation. X-ray Radiation and Artificial Bragg Structures presents the historical prolegomena relating to X-ray sources and the initial development of ABS. It analyzes the modeling of ABS characteristics and performance, and their optimization. It also presents matrix and recursive methods, coupled-wave theory and scattering theory. This book also examines ABSs as seats for special quantum and magnetooptic phenomena. It discusses the application of ABSs, as well as promising developments in EUV lithography and the realization of new

lasers.

X-ray sources. Finally, it presents the prospects offered by ABSs in the near future, particularly in the field of coherent sources and X-ray