Record Nr. UNINA9910299839703321 Autore Mohs William F Titolo Heat and Mass Transfer in the Melting of Frost / / by William F. Mohs, Francis A. Kulacki Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2015 **ISBN** 3-319-20508-0 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (104 p.) Collana SpringerBriefs in Thermal Engineering and Applied Science, , 2193-2530 Disciplina 621.4022 Soggetti Thermodynamics Heat engineering Heat transfer Mass transfer Low temperature physics Low temperatures **Energy efficiency** Engineering Thermodynamics, Heat and Mass Transfer Low Temperature Physics **Energy Efficiency** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto 1. Introduction -- 2. State-of-the-Art -- 3. Multi-Stage Defrost Model -- 4. Experimental Method -- 5. Measurement of the Defrost Process -- 6. Solution of the Defrost Model. This Brief is aimed at engineers and researchers involved in the Sommario/riassunto refrigeration industry: specifically, those interested in energy utilization and system efficiency. The book presents what the authors believe is the first comprehensive frost melting study involving all aspects of heat and mass transfer. The volume's description of in-plane and normal digital images of frost growth and melting is also unique in the field, and the digital analysis technique offers an advantage over invasive

measurement methods. The scope of book's coverage includes

modeling and experimentation for the frost formation and melting processes. The key sub-specialties to which the book are aimed include refrigeration system analysis and design, coupled heat and mass transfer, and phase-change processes.