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Titolo	Heat Transfer : Fundamentals, Enhancement and Applications / / edited by Salim Newaz Kazi
Pubbl/distr/stampa	London : , : IntechOpen, , 2023 ©2023
Descrizione fisica	1 online resource (ix, 290 pages) : illustrations
Disciplina	621.4022
Soggetti	Heat - Transmission
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Boiling and Condensation -- 2. Heat Transfer in Double-Pass Solar Air Heater: Mathematical Models and Solution Strategy -- 3. Transfer of Heat through a Thin Liquid Film -- 4. Heat and Mass Transfer of a Decoupling Cooling System: A Desiccant-Coated Heat Exchanger and a Dew-Point Evaporative Cooler -- 5. Dropwise Condensation and Heat Transfer -- 6. Boiling Heat Transfer on the Micro-Textured Interfaces -- 7. Multi-Track Overlapping by Laser-Treated and Its Effects on the Microstructural Behavior of Al-Fe Alloy Assessed by FEM -- 8. A Review on Condensation Process of Refrigerants in Horizontal Microfin Tubes: A Typical Example -- 9. Internal and External Influences on Hydro-Thermal Behavior of Micro-channel Flow -- 10. The Combined Method to Improve Heat Transfer Coefficient on Heat Exchanger -- 11. Enhancing Surface Heat Transfer Characteristics Using Laser Texturing -- 12. Digital Twin of Heat Exchanger -- 13. Fouling and Mechanism -- 14. Fouling in Industrial Heat Exchangers: Formation, Detection and Mitigation.
Sommario/riassunto	This book introduces the fundamentals, enhancements, applications, and modeling of heat transfer phenomena. Topics covered include heat transfer equations and applications in the estimation of heat energy transportation, heat transfer in specific applications, microchannel flow, condensation of refrigerants in modified heat exchanger tubes, alteration of tube surface texture for augmentation of heat transfer, boiling, etc. Also considered are fouling mitigation approaches to

prolong heat exchanger operation, as well as tube coatings, heat exchanger digital twins, and various surface alteration techniques. Double-pass solar air heating and phenomena including heat transfer through thin liquid film and surface texture alteration for boiling heat transfer are discussed.