Record Nr. UNINA9910983089403321 Autore Lubguban Arnold A Titolo Computational Thermo-kinetics of Rigid Polyurethane Foams: Theory and Applications / / by Arnold A. Lubguban, Arnold C. Alguno, Roberto M. Malaluan, Gerard G. Dumancas Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2025 Pubbl/distr/stampa **ISBN** 9789819620777 9819620775 Edizione [1st ed. 2025.] Descrizione fisica 1 online resource (165 pages) Collana SpringerBriefs in Applied Sciences and Technology, , 2191-5318 Altri autori (Persone) AlgunoArnold C MalaluanRoberto M DumancasGerard G Disciplina 530.10285 Soggetti Mathematical physics Computer simulation Materials science - Data processing Artificial intelligence Quantum computers Computational Physics and Simulations Computational Materials Science Artificial Intelligence Quantum Computing Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia

Nota di contenuto -- Foundations of Computational Thermokinetics in RPUF. -- Modeling

Techniques. -- Key Factors in Computational Modeling of RPUF. --

Implications and Future Outcomes.

This book presents a detailed exploration of advanced computational Sommario/riassunto

> modeling techniques in the design, testing, and applications of rigid polyurethane foams (RPUFs). By leveraging modern approaches such as

database-driven predictions, iterative simulations, and emerging innovations in computational material engineering, it offers a more accurate and efficient way to model the thermo-kinetic behavior of RPUFs. The necessity for computational tools in materials science is intertwined with the growth of the polyurethane market, with many academic and industrial researchers seeking to adopt these methods. The book comprehensively discusses the advancement in bridging the gap between traditional empirical methods and cutting-edge computational techniques specifically applied to RPUFs. Furthermore, it is a comprehensive guide to the computational modeling of the thermo-kinetics of RPUFs, making it an essential resource for researchers, engineers, and academicians seeking to innovate in material science and engineering. This book addresses a niche yet critical area within this broader scope.