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Titolo	Thermal Physics and Thermal Analysis : From Macro to Micro, Highlighting Thermodynamics, Kinetics and Nanomaterials // edited by Jaroslav Šesták, Pavel Hubík, Jiří J. Mareš
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Descrizione fisica	1 online resource (XXVII, 567 p. 179 illus., 83 illus. in color.)
Collana	Hot Topics in Thermal Analysis and Calorimetry, , 1571-3105 ; ; 11
Disciplina	543.086
Soggetti	Physical chemistry Ceramics Glass Composites (Materials) Composite materials Thermodynamics Physical Chemistry Ceramics, Glass, Composites, Natural Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	From the Contents: Calorimetry on time scales from days to microseconds -- The use of digital image processing for local thermal analysis and other techniques -- Glass behavior at nanostate, glass transition and fictive temperatures -- Quantum aspects of nanomaterials characterization -- Kinetic phase diagrams as a consequence of radical changing temperature or particle size -- Material properties and thermal analysis of non-stoichiometric solids -- Ehrenfest equations for calorimetry and dilatometry.
Sommario/riassunto	Features twenty-five chapter contributions from an international array of distinguished academics based in Asia, Eastern and Western Europe, Russia, and the USA. This multi-author contributed volume provides an up-to-date and authoritative overview of cutting-edge themes involving the thermal analysis, applied solid-state physics, micro- and nano-crystallinity of selected solids and their macro- and microscopic

thermal properties. Distinctive chapters featured in the book include, among others, calorimetry time scales from days to microseconds, glass transition phenomena, kinetics of non-isothermal processes, thermal inertia and temperature gradients, thermodynamics of nanomaterials, self-organization, significance of temperature and entropy. Advanced undergraduates, postgraduates and researchers working in the field of thermal analysis, thermophysical measurements and calorimetry will find this contributed volume invaluable. This is the third volume of the triptych volumes on thermal behaviour of materials; the previous two receiving thousand of downloads guaranteeing their worldwide impact.

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