Record Nr. UNINA9910876769503321 High-temperature superconductor materials, devices, and applications : **Titolo** proceedings of the 106th Annual Meeting of the American Ceramic Society, Indianapolis, Indiana, USA (2004) / / editors, M. Parans Paranthaman ... [et al.] Pubbl/distr/stampa Westerville, Ohio, : American Ceramic Society, c2005 **ISBN** 1-280-67306-0 9786613649997 1-118-40716-4 1-118-40717-2 Descrizione fisica 1 online resource (102 p.) Collana Ceramic transactions;; v. 160 Altri autori (Persone) ParanthamanM. P (Mariappan Parans) Disciplina 621.3/5 Soggetti High temperature superconductors - Materials Superconductors - Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "This volume contains proceedings of the papers presented at the High-Temperature Superconductor Materials, Devices and Applications Symposium [held] during the 106th Annual Meeting of the American Ceramic Society (ACerS), April 18-21, 2004 in Indianapolis, Indiana."-p. vii. Nota di bibliografia Includes bibliographical references and indexes. High-Temperature Superconductor Materials, Devices, and Nota di contenuto Applications; Contents; Preface; YBCO Coated Conductors; Improving Flux Pinning in YBa2Cu3O7 coated Conductors by Changing the Buffer Layer Deposition Conditions; Processing and Characterization of (Y1-x Tbx)Ba2Cu3O7-z Superconducting Thin Films Prepared by Pulsed Laser Deposition; Finite Element Modeling of Residual Stresses in Multilayered Coated Conductors; Pulsed Laser Deposition of Nd-Doped YBa2Cu3O7-6 Films; Buffer Layers; Epitaxial Growth of Eu3NbO7 Buffer Layers on Biaxially Textured Ni-W Substrates Pulsed Laser Deposition of (Y1-xCax)Ba2NbO6 (x = 0.0, 0.05, 0.1, 0.2, 0.4) Buffer Layers Electrodeposited Biaxially Textured Ni-W Layer; Growth of Ba2YNbO6 Buffer Layers by Pulsed Laser Deposition on Biaxially Textured Ni-Alloy and Cu-Alloy Substrates; Bulk Superconductors; Coarsening of BaCeO3 and Y2BaCuO5 Particles in

YBa2Cu3O7-x Semisolid Melt; The Microstructure and Superconducting Properties of YBa2Cu3Oy-Based Ceramics; The Crystal Structures of Some Transition Metal Stabilised Mercury Cuprate Superconductors; Author Index; Keyword Index

## Sommario/riassunto

This proceedings investigates the relationship between features at the atomic level including oxygen vacancies, stacking faults and site order/disorder, grain boundaries, film-substrate interactions, buffer-superconductor interactions, thermodynamic, transport, and other macroscopic properties. This proceedings will also cover fundamental material properties studies, new growth methods, device and materials integration research, and developments in designing and growing new materials, all involving epitaxial superconducting thin films.