1. Record Nr. UNINA9911007104703321 Autore Dutta Kingshuk **Titolo** Direct Methanol Fuel Cell Technology / / Dutta, Kingshuk Pubbl/distr/stampa San Diego, CA, USA, : Elsevier Science, 2020 **ISBN** 9780128191583 0128191589 Descrizione fisica 1 online resource Altri autori (Persone) **DuttaKingshuk** Soggetti Direct methanol fuel cells Methanol as fuel Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Sommario/riassunto Direct Methanol Fuel Cell Technology presents the overall progress witnessed in the field of DMFC over the past decade, highlighting the components, materials, functions, properties and features, designs and configurations, operations, modelling, applications, pros and cons, social, political and market penetration, economics and future directions. The book discusses every single aspect of DMFC device technology, the associated advantages and drawbacks of state-of-theart materials and design, market opportunities and commercialization aspects, and possible future directions of research and development. This book, containing critical analyses and opinions from experts around the world, will garner considerable interest among actual users/scientists/experts. Analyzes developments of membrane electrolytes, electrodes, catalysts, catalyst supports, bipolar plates, gas diffusion layers and flow channels as critical components of direct methanol fuel cells Includes modeling of direct methanol fuel cells to understand their scaling up potentials Discusses commercial aspects of

direct methanol fuel cells in terms of market penetration, end

drawbacks and prospects

application, cost, viability, reliability, social and commercial perception,