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|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Titolo                  | Electropolymerization [[electronic resource] ] : concepts, materials and<br>applications / / edited by Serge Cosnier and Arkady Karyakin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| Descrizione fisica      | 1 online resource (298 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Altri autori (Persone)  | CosnierSerge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                         | KaryakinArkady                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Disciplina              | 620.19<br>620.19204297                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Soggetti                | Polymers - Electric properties                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                         | Conducting polymers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                         | Electronic books.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| Nota di bibliografia    | Includes bibliographical references and index.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Nota di contenuto       | Electropolymerization; Contents; Preface; List of Contributors; 1<br>Electropolymerized Films of p-Conjugated Polymers. A Tool for Surface<br>Functionalization: a Brief Historical Evolution and Re; 2 Mechanisms of<br>Electropolymerization and Redox Activity: Fundamental Aspects; 3<br>Electrochemical Impedance Spectroscopy (EIS) for Polymer<br>Characterization; 4 Recent Trends in Polypyrrole Electrochemistry,<br>Nanostructuration, and Applications 77; 5 Electropolymerized Azines: a<br>New Group of Electroactive Polymers; 6 Electropolymerization of<br>Phthalocyanines; 7 Imprinted Polymers<br>8 Gas Sensing with Conducting Polymers9 Chemical Sensors Based on<br>Conducting Polymers; 10 Biosensors Based on Electropolymerization for<br>Energy Conversion and Storage; 12 Electrochemomechanical Devices:<br>Artificial Muscles; Index |

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| Sommario/riassunto | Providing extensive coverage, including conducting, insulating and                                                                   |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------|
|                    | electroactive films, this handbook and ready reference deals with introductory topics and fundamentals as well as advanced insights. |
|                    | Clearly structured, in the first part of the book readers learn the                                                                  |
|                    | fundamentals of electropolymerizatoin for all important types of polymers, mechanisms of film formation and functionalization, while |
|                    | the second part covers a wide range of applications in biochemistry, analytics, photovoltaics, energy and the environment as well as |
|                    | actuators.                                                                                                                           |