

- | | |
|-------------------------|---|
| 1. Record Nr. | UNINA990006187920403321 |
| Autore | Cammeo, Federico <1872-1939> |
| Titolo | La competenza di legittimita' della IV sezione e l'apprezzamento dei fatti valutabili secondo criteri tecnici / F. Cammeo |
| Pubbl/distr/stampa | Torino : U.T.E.T, s.d. |
| Descrizione fisica | 5_14 p. ; 24 cm |
| Disciplina | 347 |
| Locazione | FGBC |
| Collocazione | BUSTA 12 (23) 1 |
| Lingua di pubblicazione | Non definito |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| 2. Record Nr. | UNINA9910131321103321 |
| Autore | Leprince-Wang Yamin |
| Titolo | Piezoelectric ZnO nanostructure for energy harvesting // Yamin Leprince-Wang |
| Pubbl/distr/stampa | Hoboken, New Jersey : , : iSTE/Wiley, , 2015 |
| ISBN | 1-119-00744-5
1-119-00742-9 |
| Descrizione fisica | 1 online resource (148 p.) |
| Collana | Nanoscience and nanotechnology series. Nanotechnologies for energy recovery set ; ; volume 1 |
| Disciplina | 620.10923489 |
| Soggetti | Piezoelectric devices
Piezoelectricity
Electronic books. |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Cover; Title Page; Copyright; Contents; Preface; Acknowledgments; |

Introduction; 1: Properties of ZnO; 1.1. Crystal structure of ZnO; 1.2. Electrical properties of ZnO and Schottky junction ZnO/Au; 1.3. Optical properties of ZnO; 1.4. Piezoelectricity of ZnO; 2: ZnO Nanostructure Synthesis; 2.1. Electrochemical deposition for ZnO nanostructure; 2.1.1. Electrodeposition of monocrystalline ZnO nanowires and nanorods via template method; 2.1.1.1. Individual nanowire growth; 2.1.1.2. Nanopillar array growth; 2.1.2. ZnO nanowire array growth via electrochemical road
2.2. Hydrothermal method for ZnO nanowire array growth
2.3. Comparative discussion on ZnO nanowire arrays obtained via electrodeposition and hydrothermal method; 2.4. Influence of main parameters of hydrothermal method on ZnO nanowire growth morphology; 2.4.1. Effect of the growth method; 2.4.2. Effect of the growth solution pH value; 2.4.3. Effect of the growth temperature; 2.4.4. Effect of the growth time; 2.5. Electrospinning method for ZnO micro/nanofiber synthesis; 3: Modeling and Simulation of ZnO-Nanowire-Based Energy Harvesting; 3.1. Nanowire in bending mode
3.1.1. Influence of the nanowire length
3.1.2. Influence of the nanowire diameter; 3.1.3. Influence of the aspect ratio; 3.2. Nanowire in compression mode; 3.2.1. Influence of the nanowire length; 3.2.2. Influence of the nanowire diameter; 3.2.3. Influence of the aspect ratio; 3.3. Nanowire arrays in static and vibrational responses; 3.3.1. Nanowire arrays in static and compressive responses; 3.3.2. Nanowire arrays in periodic vibrational response; 4: ZnO-Nanowire-Based Nanogenerators: Principle, Characterization and Device Fabrication; 4.1. Working principle of nanogenerators
4.2. ZnO-nanowire-based energy harvesting device fabrication
4.3. ZnO-nanowire-based energy harvesting device characterization; 4.4. ZnO-nanostructure-based hybrid nanogenerators; Conclusion; Bibliography; Index

Sommario/riassunto

Over the past decade, ZnO as an important II-VI semiconductor has attracted much attention within the scientific community over the world owing to its numerous unique and prosperous properties. This material, considered as a "future material", especially in nanostructural format, has aroused many interesting research works due to its large range of applications in electronics, photonics, acoustics, energy and sensing. The bio-compatibility, piezoelectricity & low cost fabrication make ZnO nanostructure a very promising material for energy harvesting.
