1. Record Nr. UNINA9910965265403321

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Titolo	Interactions of herbicide atrazine with DNA / / Maria Hepel and Magdalena Stobiecka
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2010
ISBN	1-61761-354-1
Edizione	[1st ed.]
Descrizione fisica	1 online resource (76 p.)
Collana	DNA: properties and modifications, functions and interactions, recombination and applications. Environmental science, engineering and technology.
Altri autori (Persone)	StobieckaMagdalena
Disciplina	572.8/6
Soggetti	DNA-drug interactions Atrazine - Toxicology Biosensors Environmental monitoring - Methodology
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	Intro -- INTERACTIONS OF HERBICIDE ATRAZINE WITH DNA -- INTERACTIONS OF HERBICIDE ATRAZINE WITH DNA -- Contents -- Preface -- Chapter I Introduction -- Chapter II Materials and Methods -- 2.1. Chemicals -- 2.2. APPARATUS -- 2.3. PREPARATION OF BIOSENSORS -- QC/Au/Cit/PLL/ctDNA Sensor -- QC/Au/MPA/DNA20 bp -- QC/Au/AET/AuNP@MPA/dsDNA20 bp -- 2.4. PROCEDURES -- Cleaning of Gold Disk Electrodes -- Synthesis of Gold Nanoparticles -- DNA Damage Testing -- Voltammetric Measurements -- Ab-Initio Calculations -- Chapter III Results and Discussion -- 3.1. Design of Hybridization Biosensors for Investigations of DNA Damage by Toxicants -- 3.2. INTERACTIONS OF ATRAZINE WITH DNA IN SOLUTION -- 3.3. Vertical Short-Chain DNA Biosensors for Atrazine Intercalation Measurements -- 3.4. Interactions of Atrazine with DNA-Modified Gold Nanoparticles -- 3.5. Interactions of Atrazine with DNA-Modified Nanostructured Piezosensors -- 3.6. New Ferrocene-Modified DNA Biosensors for Comparative Analysis of DNA Damage Caused by Herbicides and Pesticides -- 3.7. Kinetics of DNA Damage and Unwinding -- 3.8. Theoretical Bases of Atrazine Interactions with DNA Double-Helix -- Chapter IV Conclusion --

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Sommario/riassunto	New methods used for the detection of DNA hybridization process, including electrochemical, optical scattering, surface plasmon resonance, nanogravimetric, and fluorimetric are described and their application in assays assessing DNA damage is discussed in this book. The analyses of damage and alterations for the DNA in solution as well as for the DNA immobilized on core-shell gold nanoparticles and solid electrodes are presented. These methods enable evaluating the degree of DNA damage caused by toxicants and can be applied to studies of the interactions of atrazine and other herbicides and pesticides with DNA.