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| 1. Record Nr. | UNISA996213209903316 |
| Titolo | Handbook of green chemistry and technology [[electronic resource] /] / edited by James Clark and Duncan Macquarrie |
| Pubbl/distr/stampa | Oxford [England] ; ; Malden, MA, : Blackwell Science, 2002 |
| ISBN | 1-280-74284-4 9786610742844 1-4051-2332-X 0-470-98830-4 1-4051-7248-7 |
| Descrizione fisica | 1 online resource (562 p.) |
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| Disciplina | 660 |
| Soggetti | Environmental chemistry - Industrial applications Environmental management |
| 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 | Handbook of GREEN CHEMISTRY AND TECHNOLOGY; Contributors; Contents; Preface; 1: Introduction; 1 Introduction; 1.1 Chemistry-past, present and future; 1.2 The costs of waste; 1.3 The greening of chemistry; References; 2: Principles of Sustainable and Green Chemistry; 1 Introduction; 2 Green Chemistry and Industry; 3 Waste Minimisation and Atom Economy; 3.1 Atom economy; 3.2 Some inherently atom economic reactions; 3.3 Some inherently atom uneconomic reactions; 4 Reduction of Materials Use; 4.1 Catalytic solutions; 4.2 Question the need for protection 4.3 Reduction of non-renewable raw material use4.4 Process intensification; 5 Reduction of Energy Requirement; 5.1 Some energy efficiency improvements; 5.2 Alternative energy sources; 6 Reduction of Risk and Hazard; 6.1 Inherently safe design; 6.2 Alternative solvents; 7 Conclusions; References; 3: Chemistry and the Environment; 1 Introduction; 2 Chemistry of the Atmosphere; 2.1 Structure of the atmosphere; 2.2 Tropospheric pollution; 2.3 Stratospheric pollution; 2.4 Pollution of the built environment; 3 Chemistry of the Terrestrial |

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3.2 Pollution of the land3.3 Freshwaters; 3.4 Pollution of freshwater; 4
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Sommario/riassunto

Sustainable development is now accepted as a necessary goal for achieving societal, economic and environmental objectives. Within this chemistry has a vital role to play. The chemical industry is successful but traditionally success has come at a heavy cost to the environment. The challenge for chemists and others is to develop new products, processes and services that achieve societal, economic and environmental benefits. This requires an approach that reduces the materials and energy intensity of chemical processes and products; minimises the dispersion of harmful chemic
