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Nota di contenuto	Managing CO2 Emissions in the Chemical Industry; Contents; Preface; List of Contributors; Trends in Energy and CO2 Reduction in the Chemical Process Industry; 1: Climate Change; 2: Overview of the Chemical Process Industry; 3: Energy Consumption, CO2 Emissions and Energy Efficiency; 3.1 Energy Consumption and CO2 Emissions in General; 3.2 Energy Consumption and CO2 Emissions in the Chemical Industry; 3.3 Energy Prices; 3.4 Energy Efficiency in the Chemical Industry; 4: Political Framework and Trends; 5: Kyoto Process and National Programs; 5.1 Kyoto Protocol; 5.2 Flexible Mechanisms 5.3 Post-Kyoto Negotiations5.3.1 Mitigation Policy; 5.3.2 Adaptation; 5.3.3 Financing; 5.3.4 Technology; 5.4 National Programs; 5.4.1 United States of America; 5.4.2 Japan; 5.4.3 European Union; 5.4.4 China; 5.4.5 India; 6: Company Initiatives; 6.1 Novartis; 6.2 Roche; 6.3 Dow; 6.4 DuPont; 6.5 Bayer; Acknowledgment; References; Part One: Administrative and Cultural Aspects; 1: Analysis Methods for CO2 Balances; 1.1 CO2 Balances and Carbon Footprints; 1.1.1 Measuring Impact on Global Warming; 1.1.2 A Simple CO2 Balance; 1.1.3 Carbon

Footprints-A Few Examples; 1.1.4 Company Carbon Balances
1.1.5 CO2 Balances Related to Emission Certificates
1.1.6 The CO2 Abatement Curve; 1.2 Product Carbon Footprints (PCF); 1.2.1 PCF Methodology; 1.2.1.1 Goal and Scope; 1.2.1.2 Data Retrieval and Data Sources; 1.2.1.3 Calculation Tools; 1.2.2 PCF from Cradle-to-Gate; 1.2.2.1 Energy Supply; 1.2.2.2 Raw Materials; 1.2.2.3 Logistics and Supply Chain; 1.2.2.4 Manufacturing and Product Allocation; 1.2.3 Cradle-to-Grave Carbon Footprints; 1.3 Remarks and Summary; References; 2: Managing the Regulatory Environment; 2.1 Introduction; 2.2 Overview of Climate Policy; 2.2.1 Economics of Climate Change 2.2.2 Policy Measures to Mitigate Greenhouse Gas Emissions
2.2.2.1 Cap-and-Trade; 2.2.2.2 Command-and-Control; 2.2.2.3 Hybridization of Taxation and Trading; 2.3 Carbon Compliance for the Chemical Process Industry; 2.3.1 Carbon Pricing and Industry Exposure; 2.3.2 Applying Carbon Pricing to the Chemical Production Chain; 2.3.2.1 Electricity Generation and Supply; 2.3.2.2 Feedstock Extraction, Transportation, and Preparation; 2.3.2.3 Basic Chemical Preparation; 2.3.2.4 Subsector Chemical Preparation; 2.3.3 Opportunities within a Compliance Market; 2.4 Carbon Offsetting in the Chemical Industry 2.4.1 Concept of Offsetting
2.4.2 Flexible Mechanisms of the Kyoto Protocol; 2.4.2.1 Developing a CDM Project; 2.4.2.2 Developing a JI Project; 2.4.3 International Offsetting in a Post-2012 Context; 2.4.3.1 Scaling up the CDM via Benchmarking; 2.4.3.2 Sectoral Crediting Mechanisms (SCM); 2.5 Positioning Industry for a Global Framework on Climate Change; 2.5.1 Defining Sectors within a Regulated Environment; 2.5.2 Allocating for the Chemical Industry; 2.5.3 Key Messages Moving Forward; References; 3: Implementation of Energy Awareness in Plants
3.1 Energy Awareness and Environmental Sustainability

Sommario/riassunto

This unrivaled reference and handbook on this hot topic covers the technical and administrative aspects of CO2 emissions, with special reference to the chemical and petrochemical industry. It also discusses energy efficient design, cultural aspects and future developments, answering such questions along the way as:- How can I measure and demonstrate the CO2 emissions linked to my production?- How can I benefit from CO2 neutral investments using the UNFCCC frame?- How can I reduce or avoid CO2 emissions by technical measures and new processes?- If CO2 emissions cannot be avoided
