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Nota di contenuto	Philip Hodge, A Green Method for Potentially Recycling Condensation Polymers: Ring-chain Recycling -- Attilio Citterio, Green syntheses of bicarboxylic acids for polymer manufactures -- Carlo Perego, Zeolites as catalysts for MDA synthesis and DMC as reagent for MDI e TDI manufacture -- Marcella Fernandes de Souza, Ricardo Sposina Sobral Teixeira, Ayla Sant'Ana da Silva, Viridiana Santana Ferreira-Leitão, Elba Pinto da Silva Bon, Chlorine-free biomass processing: enzymatic alternatives for bleaching and hydrolysis of lignocellulosic materials -- Yehuda Shevah, Substitution of chloride chemicals with degradable bio-flocculants for sedimentation of suspended particles in water -- Ekaterina Lokteva, Elena Golubina, Vladimir Likholobov and Valery Lunin, Disposal of chlorine-containing wastes -- Claudio J. A. Mota, Chlorine-Free Heterogeneous Acid Catalysts -- Yury Treger and Mark Flid, Chloroorganic synthesis: Problems? Outlook! -- Aziz Muzafarov,

Polymers beyond chlorine -- Shouying Huang, Yuanyuan Dong, Shengping Wang, Xinbin Ma, Chlorine-Free Catalysis for the Synthesis of Dialkyl Carbonate via Oxidative Carbonylation of alcohols -- Mei-Yan Wang, Hai-Bo Wang, Qiang-Hao Qu, Liang-Nian He, Industrial Production of Dimethyl Carbonate from CO2 in China -- Binshen Wang, Elnazeer H. M. Elageed, Guohua Gao, Organic Carbonates Transformation Catalyzed by Ionic Liquids -- Shin-ichiro Fujita, Hiroshi Yoshida, Masahiko Arai, Synthesis of Carbonate Compounds Using Carbon Dioxide and Carbon Dioxide – Derived Materials -- Zhongwei Fu and Yuezhong Meng, Research Progress in the Phosgene-free and Direct Synthesis of Dimethyl Carbonate from CO2 and Methanol -- Qing-Wen Song and Liang-Nian He, Heterocyclic Synthesis through C-N Bond Formation with Carbon Dioxide -- Huanwang Jing, Beyond Chlorine Reagents: Organic Carbonate Chemistry -- Ian D. V. Ingram, Professor Michael North and Dr. Xiao Wu, Halide free synthesis of cyclic and polycarbonates -- Aurelia Visa, Bianca Maranescu, Gheorghe Ilia, Hypophosphorus Acid and its Salts as Reagents in Organophosphorus Chemistry -- Maria Caporali, Manuel Serrano Ruiz, Maurizio Peruzzini, Benign chlorine-free approaches to organophosphorus compounds -- Pietro Tundo and Fabio Aricò, Dialkyl Carbonates in the synthesis of heterocycles -- John Andraos, Application of Green Metrics Analysis to the Synthesis of Dicyclohexylcarbodiimide (DCC) – Comparison of Chlorine versus Non-chlorine Based Routes -- Feng Wang, Wenbo Liu and Chao-Jun Li, Catalytic Grignard-Type Addition of Aryl C-H Bonds to C=O and C=N Bonds -- Oleg M. Demchuk, Radomir Jasiski, Adam Formela, The halogenless catalytic transition metal mediated cross-coupling reactions. A sustainable alternative for utilisation of organohalides.

Sommario/riassunto

Since the industrial revolution, chlorine remains an iconic molecule even though its production by the electrolysis of sodium chloride is extremely energy intensive. The rationale behind this book is to present useful and industrially relevant examples for alternatives to chlorine in synthesis. This multi-authored volume presents numerous contributions from an international spectrum of authors that demonstrate how to facilitate the development of industrially relevant and implementable breakthrough technologies. This volume will interest individuals working in organic synthesis in industry and academia who are working in Green Chemistry and Sustainable Technologies.