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Nota di contenuto

Organic Azides Syntheses and Applications; Contents; Foreword; Preface; List of Contributors; Abbreviations; PART 1: Synthesis and Safety; 1: Lab-scale Synthesis of Azido Compounds: Safety Measures and Analysis; 1.1 Introduction; 1.2 Properties that Impose Restrictions on Lab-scale Handling of Azides; 1.2.1 Hydrazoic Acid and Its Metal Salts; 1.2.2 Organic Azides; 1.3 Laboratory Safety Instructions for the Small-scale Synthesis of Azido Compounds; 1.4 Analyzing Safety-related Properties of Azides; 1.4.1 Impact Sensitivity Testing; 1.4.2 Friction Sensitivity Testing; 1.4.3 ESD Testing
1.4.4 Thermoanalytical Measurements1.4.5 Calorimetric and Gravimetric Stability Tests; 1.4.6 Koenen Test; References; 2: Large-scale Preparation and Usage of Azides; 2.1 Introduction; 2.2 Precursor Azides, Technical Production and Properties; 2.2.1 Sodium azide (NaN3); 2.2.2 Trimethylsilyl Azide (TMSA)14; 2.2.3 Diphenylphosphoryl Azide (DPPA)14; 2.2.4 Tributyltin Azide (TBSnA); 2.2.5 Azidoacetic Acid Ethyl Ester (AAE)14; 2.2.6 Tetrabutylammonium Azide (TBAA)14; 2.2.7 Others; 2.3 Examples for the Use of Azides on a Technical Scale; 2.3.1 Addition of NaN3 to Multiple CC- or CN-Bonds
2.3.2 Addition of Alk-N3 and Ar-N3 to Multiple CC- and/or CN-Bonds2.3.3 Carboxylic Acid Azides: Precursors for Isocyanates; 2.3.4 Organic Azides: Ring Opening Reaction on Oxiranes and Aziridines: Paclitaxel, Tamiflu®; 2.3.5 Organic Azides: Protective Group, Masked Amines; 2.3.6 Organic Azides: Cross-linking Agents for Polymers; 2.4 The Future of Commercial-scale Azide Chemistry; References; 3: Synthesis of Azides; 3.1 Introduction; 3.2 Synthesis of Alkyl Azides; 3.2.1 Classic Nucleophilic Substitutions: Azides from Halides, Sulfonates, Sulfites, Carbonates, Thiocarbonates and Sulfonium Salts
3.2.2 Azides by Ring Opening of Epoxides and Aziridines3.2.3 Azides by the Mitsunobu Reaction; 3.2.4 Alkyl Azides from Amines; 3.2.5 Alkyl Azides from Carbon Nucleophiles and Electron-poor Sulfonyl Azides; 3.3 Synthesis of Aryl Azides; 3.3.1 Nucleophilic Aromatic Substitution: SNAr Reactions; 3.3.2 Aryl Azides from Diazonium Compounds; 3.3.3 Aryl Azides from Organometallic Reagents; 3.3.4 Aryl Azides by Diazo Transfer; 3.3.5 Aryl Azides from Hydrazines and from Nitrosoarenes; 3.4 Synthesis of Acyl Azides; 3.4.1 Acyl Azides from Mixed Acid Chlorides; 3.4.2 Acyl Azides from Mixed Anhydrides
3.4.3 Acyl Azides by Direct Conversion of Carboxylic Acids3.4.4 Acyl azides by Direct Conversion of Aldehydes; 3.4.5 Acyl Azides by Direct Conversion of Acylhydrazines; 3.4.6 Acyl Azides from N-acylbenzotriazoles; References; 4: Azides by Olefin Hydroazidation Reactions; 4.1 Introduction; 4.2 Conjugate Addition of Hydrazoic Acid and Its Derivatives; 4.3 Addition of Hydrazoic Acid and Its Derivatives to Non-Activated Olefins; 4.4 Cobalt-Catalyzed Hydroazidation; 4.4.1 Optimization of the Cobalt-Catalyzed Hydroazidation Reaction; 4.4.2 Scope of the Hydroazidation of Olefins
4.4.3 Further Process Optimization

Sommario/riassunto

Most current state-of-the-art overview of this important class of compounds, encompassing many new and emerging applicationsThe number of articles on organic azides continues to increase tremendously; on average, there are more than 1000 new publications a yearCovers basic chemistry as well as state-of-the-art applications in life science and materials scienceWorld-ranked authors describe their own research in the wider context of azide chemistryIncludes a chapter on safe synthesis and handling (azides can decompose explosively)