1. Record Nr. UNINA9910824523003321 Autore Burke Anthony J. **Titolo** Catalytic arylation methods: from the academic lab to industrial processes / / Anthony J. Burke and Carolina Silva Marques Weinheim, Germany: ,: Wiley-VCH Verlag GmbH & KGaA, , [2015] Pubbl/distr/stampa ©2015 **ISBN** 3-527-67274-5 3-527-67270-2 3-527-67285-0 Descrizione fisica 1 online resource (1058 p.) Disciplina 541.395 Soggetti **Arylation** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover; Related Titles; Title Page; Copyright; Dedication; Preface; List of Abbreviations: Chapter 1: Cross-Coupling Arylations: Precedents and Rapid HistoricalReview of the Field; 1.1 Metal-Catalyzed Cross-Couplings: From Its Origins to the Nobel Prize and Beyond; 1.2 Arylation: What Is So Special?; 1.3 Recent New Developments; 1.4 Selected Experiments from the Literature; References; Chapter 2: Amine, Phenol, Alcohol, and Thiol Arylation; 2.1 Introduction; 2.2 Pd-Catalyzed Processes; 2.3 Cu-Catalyzed and Promoted Arylations: (CAr-N Bond Formation); 2.4 Fe-Catalyzed Arylations 2.5 Ni-Catalyzed Reactions 2.6 Co-Catalyzed Arylations; 2.7 Mn-Catalyzed Arylations; 2.8 Cd-Catalyzed Arylations; 2.9 Bi(III) and Indium Oxide-Catalyzed Thiol Arylations; 2.10 Conclusions and Final Comment; 2.11 Selected Experiments from the Literature; References; Chapter 3: Decarboxylative Coupling Techniques; 3.1 Introduction; 3.2 Pd-Catalyzed Versions; 3.3 Other Metal-Catalyzed Versions; 3.4 Conclusions; 3.5 Selected Experiments; References; Chapter 4: C-H Bond Activation for Arylations; 4.1 Introduction; 4.2 C(sp2)-H Activations: 4.3 Conclusions 4.4 Selected Experiments from the LiteratureReferences; Chapter 5:

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## Sommario/riassunto

A current view of the challenging field of catalytic arylation reactions. Clearly structured, the chapters in this one-stop resource are arranged according to the reaction type, and focus on novel, efficient and sustainable processes, rather than the well-known and established cross-coupling methods. The entire contents are written by two authors with academic and industrial expertise to ensure consistent coverage of the latest developments in the field, as well as industrial applications, such as C-H activation, iron and gold-catalyzed coupling reactions, cycloadditions or novel methodologies