1. Record Nr. UNINA9910349517603321 Autore Zhang Wei Titolo Pot, Atom, and Step Economy (PASE) Synthesis / / by Wei Zhang, Wen-Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2019 **ISBN** 3-030-22596-8 Edizione [1st ed. 2019.] Descrizione fisica 1 online resource (55 pages) Collana SpringerBriefs in Green Chemistry for Sustainability, , 2212-9898 547.2 Disciplina Soggetti Organic chemistry Sustainable development Chemical engineering Organic Chemistry Sustainable Development Industrial Chemistry/Chemical Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Multicomponent reaction -- Introduction -- The Ugi reaction -- The Nota di contenuto passerini reaction -- The Strecker reaction -- The Hantzsch reaction --The Biginelli raction -- Other Style reaction -- One-pot synthesis --Introduction -- Various Catalyst -- Cascade reactions -- Introduction -- Application -- Classification. This book emphasizes the atom economy aspect of multicomponent Sommario/riassunto reactions. It describes how this methodology has been applied to several named reactions. Among the "twelve principles of green chemistry", atom economy addresses 'synthetic efficiency'. A multicomponent reaction can be defined as an energy, cost, and time efficient method for organic synthesis. Instead of making one or two bonds in a chemical transformation, multicomponent reactions generate several chemical bonds in a single operation. This book presents a series of detailed reaction mechanisms that beautifully illustrate this principle. Multicomponent reactions are widely applied to the preparation of complex and diverse molecular structures in

academic and industrial research laboratories. As such, this book is

targeted at researchers involved in green organic chemistry.	