1. Record Nr. UNINA9910298611203321

Autore	Doran Robert
Titolo	Asymmetric Synthesis of Bioactive Lactones and the Development of a Catalytic Asymmetric Synthesis of -Aryl Ketones / / by Robert Doran
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-20544-7
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (218 p.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	547.2
Soggetti	Chemistry, Organic Catalysis Pharmaceutical chemistry Organic Chemistry Medicinal Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Doctoral thesis accepted by the University College Dublin, Ireland."
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction to the Total Synthesis of Lactone-Containing Natural Products using ZrCl4 -- Asymmetric Synthesis of the -Methyl-Substituted Analogues of (+)-Tanikolide and (–)-Malyngolide -- Asymmetric Synthesis of Both Enantiomers of a d-Lactone Analogue of Muricatacin -- Introduction to the Development of a Catalytic Asymmetric Synthesis of Tertiary -Aryl Ketones -- A Stereoselective Switch: Enantiodivergent Approach to the Synthesis of Isoflavanones -- Asymmetric Synthesis of Tertiary -Aryl Ketones by Decarboxylative Asymmetric Protonation.
Sommario/riassunto	This thesis addresses two fundamental areas in contemporary organic chemistry: synthesis of natural products and catalytic asymmetric synthesis. Firstly, a new methodology, developed by our research group, which allows the asymmetric synthesis of lactones, a structural unit ubiquitous in natural products, was utilised in the synthesis of a number of natural product analogues that showed significant biological activity. Secondly, the development of a catalytic asymmetric synthesis of a key structural motif present in a number of natural products and pharmaceuticals was accomplished. During the course of this work we

discovered dual stereocontrol, which is significant because it allows the configuration of a new stereocentre to be controlled by a simple change of proton source.