Title:	Stereoselective synthesis, characterization and mechanistic insights of ortho-/meta-/para-(2-benzo[d]oxazolyl)phenyl substituted trans-β-lactams: Potential synthons for variegated heterocyclic molecules
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Abstract:	The present work describes the synthesis of novel ortho-, meta- and para-(2-benzo[d]oxazolyl)phenyl-β-lactams 5 using isomeric (ortho-, meta- and para-) (2-beno[d]oxazolyl)phenyl Schiff bases 4. The exclusive formation of trans configured β-lactams 5 by utilizing O-alkyl/O-aryl substituted acids have been investigated along with the diversified substrate scope and mechanistic enlightenment of the reaction. The relative trans configuration of the C-3 and C-4 protons in products 5 was examined using coupling constant value ranging from J = 1.4 to 2.6. We described here the stereoselective synthesis of trans β-lactams via ortho-/meta-/para-(2-benzo[d]oxazolyl)phenyl imines and Bose-Evans ketenes which reports generally the cis β-lactams in literature. The characterization of the synthesized products 4 and 5 was done by using various spectroscopic techniques viz. FT-IR, NMR (1H, 13C), elemental analysis (CHN), mass spectrometry (4g and 5c) and single crystal X-ray crystallography of the representative analogues 4g, 5c and 5e.
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