

# XXXV

## Società Chimica Italiana



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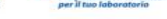
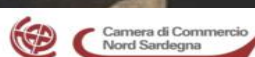
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# Convegno della Divisione di Chimica Organica

**Sassari, 9-13 Settembre 2013**  
**Campus Universitario Via Vienna**



## Lithiation of 4-Membered Heterocycles as Useful Strategy for the Preparation of New Molecular Scaffolds:

### Addressing the Regioselectivity in Azetidines and Thietanes

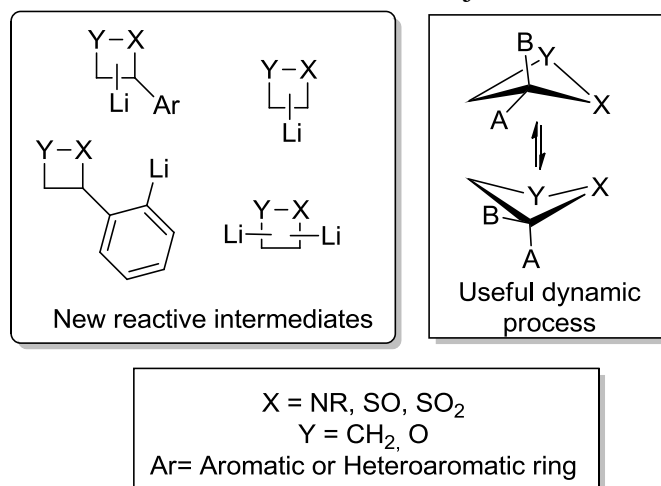
Leonardo Degennaro,<sup>a</sup> Marina Zenzola,<sup>a</sup> Piera Trincherà,<sup>a</sup> Laura Carroccia,<sup>a</sup> Arianna Giovine,<sup>a</sup> Aurelia Falcicchio,<sup>b</sup> Luisa Pisano,<sup>c</sup> and Renzo Luisi<sup>a</sup>

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Four-membered heterocycles (4-MH) with one or two heteroatoms are of great importance in medicinal chemistry and synthetic organic chemistry.<sup>1</sup> This kind of scaffolds show peculiar structural features, related to the ring "puckering", and biological properties. Our recent research efforts have been focused on the stereoselective synthesis and functionalization of some 4-MH such as azetidines, thietanes and oxazetidines. Our interest on this kind of heterocycles come from the evidence that such systems have been scarcely investigated as lithiated intermediates. Interesting results on mono- and dilithiated species as well as on the control of the regioselectivity have been obtained and will be the object of this communication.



(1a) Couty, F., Drouillat, B., Evano, G., David, O. (2013), *European Journal of Organic Chemistry* (11), pp. 2045-2056. (1b) Guérot, C., Tchitchanov, B.H., Knust, H., Carreira, E.M. (2011), *Organic Letters* 13 (4), pp. 780-783. (1c) Brandi, A., Cicchi, S., Cordero, F.M. (2008) *Chemical Reviews* 108 (9), pp. 3988-4035.