Volume 13 | Number 5 | 7 February 2015 | Pages 1267–1578

# Organic & Biomolecular Chemistry

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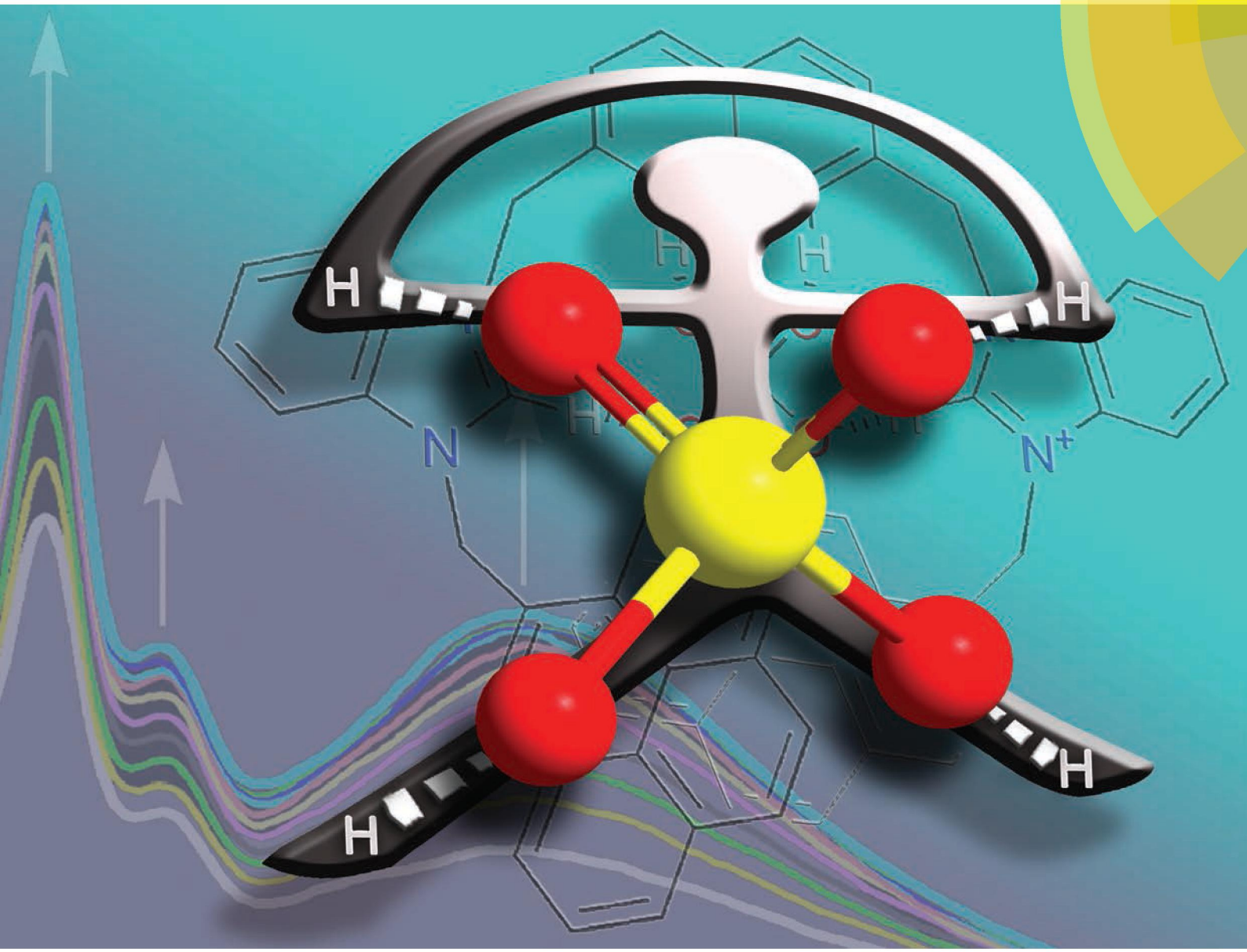


ISSN 1477-0520

ROYAL SOCIETY OF CHEMISTRY

PAPER
Antonio Caballero, Pedro Molina *et al.*
A case of oxoanion recognition based on combined cationic and neutral C–H hydrogen bond interactions

# Organic & Biomolecular Chemistry

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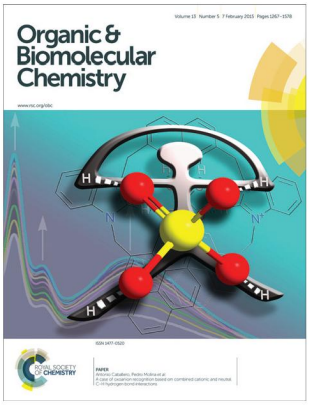
## IN THIS ISSUE

ISSN 1477-0520 CODEN OBCRAK 13(5) 1267–1578 (2015)




**Cover**
See Antonio Caballero, Pedro Molina *et al.*, pp. 1339–1346.

The image represents an Indalo rock painting of Neolithic or Copper Age found in Almeria, and was designed by A. A. Lozano-Perez.

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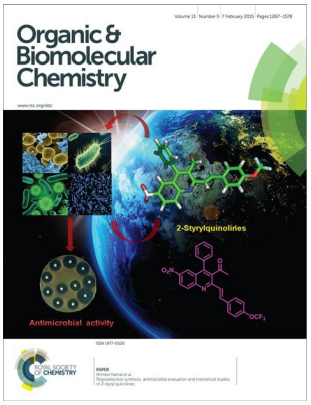


**Inside cover**
See Ahmed Kamal *et al.*, pp. 1347–1357.

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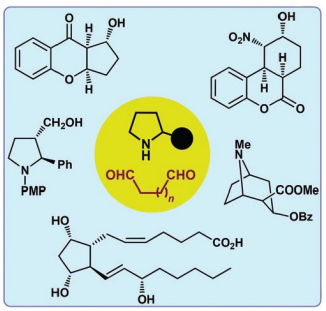
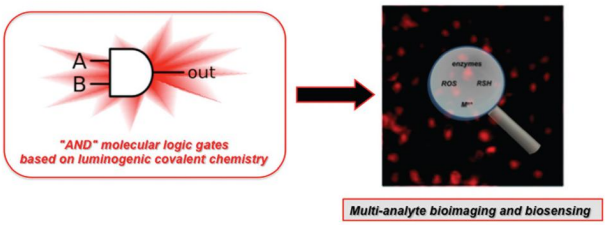
## REVIEWS







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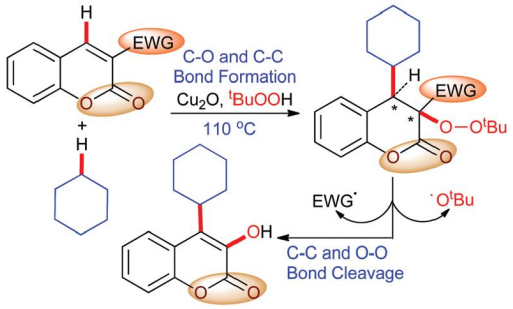
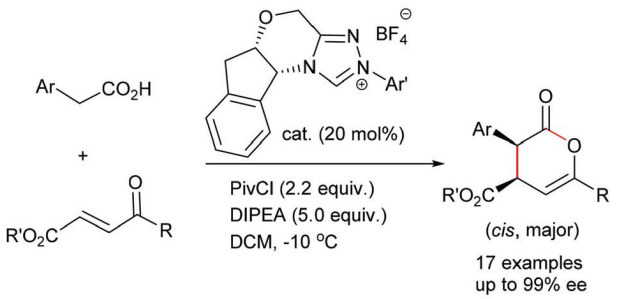
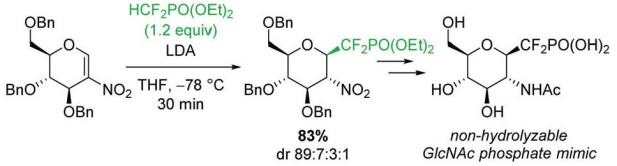


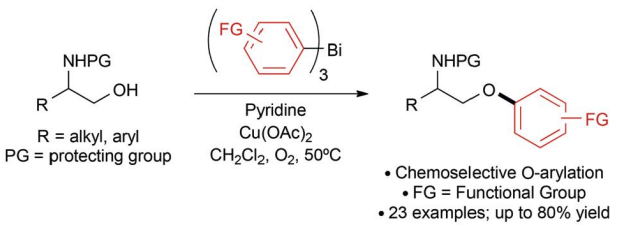




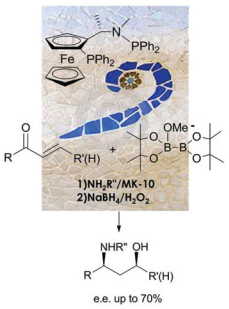





## COMMUNICATIONS



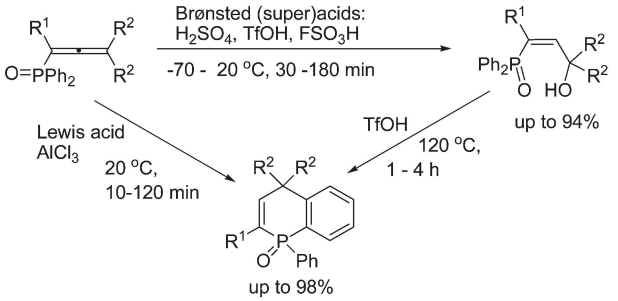



### Asymmetric metal free β-boration of α,β-unsaturated imines assisted by (*S*)-MeBoPhoz

Enrico La Cascia, Xavier Sanz, Carles Bo, Andrew Whiting* and Elena Fernandez*

The adduct [MeO → Bpin–Bpin]$^-$ efficiently mediates the β-boration of α,β-unsaturated imines formed *in situ*.





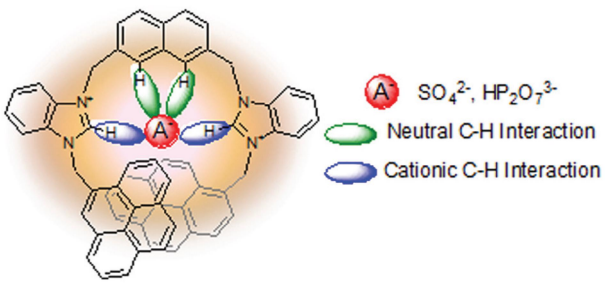

### Acid-promoted transformations of 1-(diphenylphosphoryl)allenes: synthesis of novel 1,4-dihydrophosphinoline 1-oxides

Alexander S. Bogachenkov, Albina V. Dogadina, Vadim P. Boyarskiy and Aleksander V. Vasilyev*

1-(Diphenylphosphoryl)alka-1,2-dienes in acids (TfOH, $FSO_3H$, $H_2SO_4$) give (3-hydroxyalk-1-en-1-yl)-diphenylphosphine oxides, that are further converted into 1-phenyl-1,4-dihydrophosphinoline 1-oxides. The latter compounds are directly formed from these 1,2-dienes under the action of $AlCl_3$.

## PAPERS



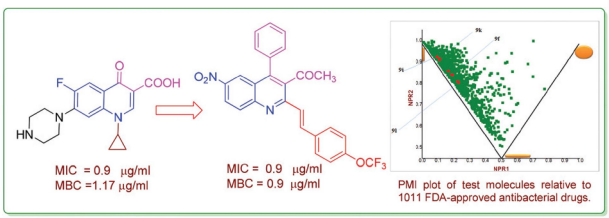



### A case of oxoanion recognition based on combined cationic and neutral C–H hydrogen bond interactions

Fabiola Zapata, Paula Sabater, Antonio Caballero* and Pedro Molina*

A bidentate bis-(benzimidazolium) receptor containing pyrene as fluorescent signaling units recognizes sulphate and hydrogenpyrophosphate in a competitive water–DMSO medium through combinations of cationic and neutral C–H hydrogen bonding.





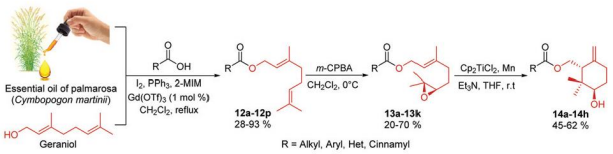

### Regioselective synthesis, antimicrobial evaluation and theoretical studies of 2-styryl quinolines

Ahmed Kamal,* Abdul Rahim, Sd Riyaz, Y. Poornachandra, Moku Balakrishna, C. Ganesh Kumar, Syed Mohammed Ali Hussaini, B. Sridhar and Pavan Kumar Machiraju

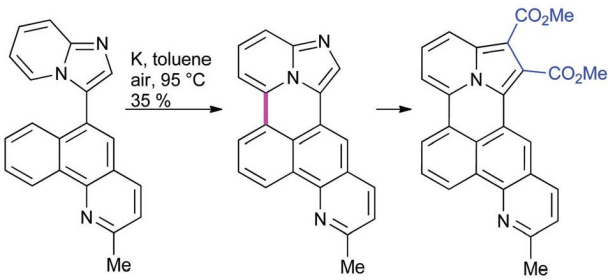
2-Styryl quinolines have been synthesized regioselectively from 2-methyl-quinoline using NaOAc in water acetic acid binary solvents and evaluated for their antibacterial activity against both Gram-positive and Gram-negative strains.

## PAPERS

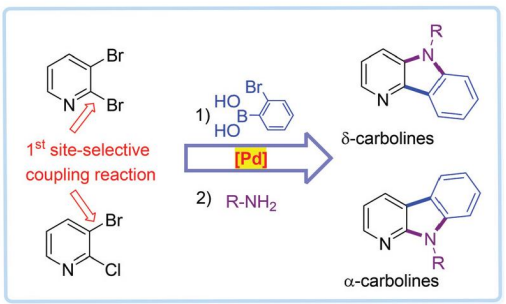




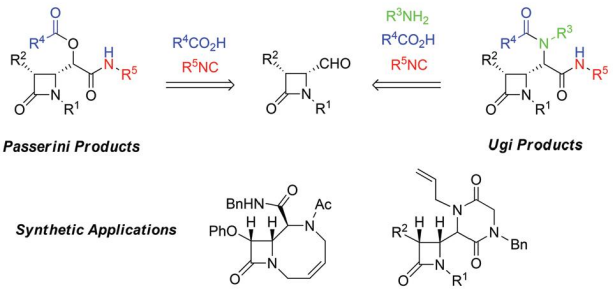






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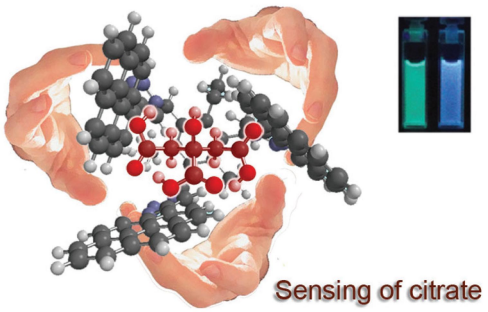




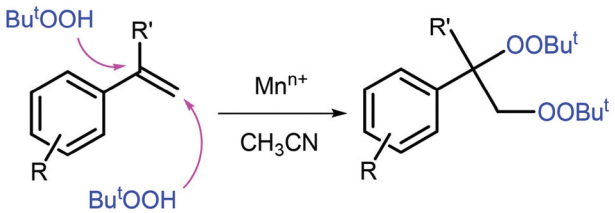




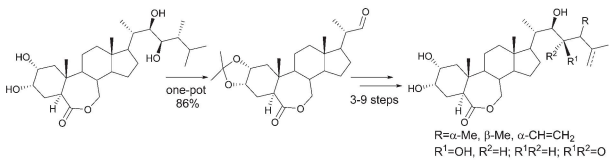




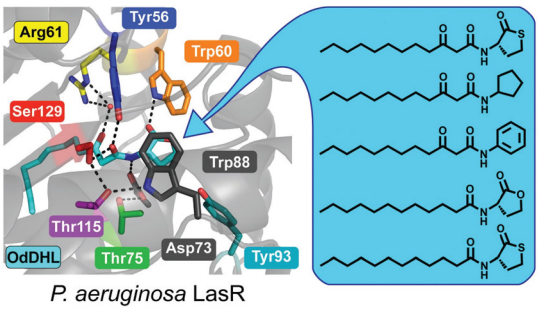

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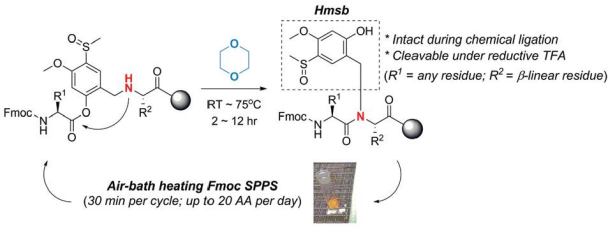




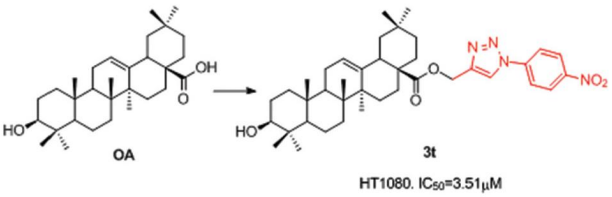




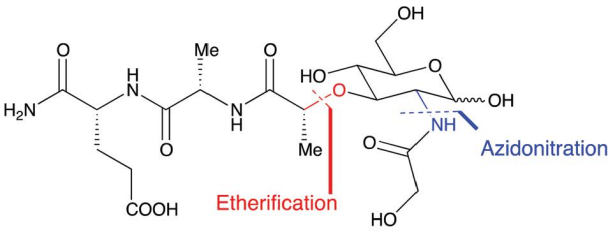


*N*-Glycolyl Muramyl Dipeptide



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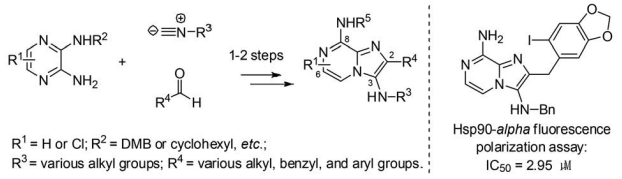
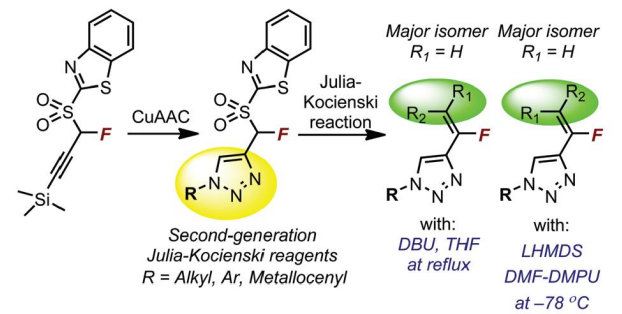



## Multi-substituted 8-aminoimidazo[1,2-*a*]pyrazines by Groebke–Blackburn–Bienaymé reaction and their Hsp90 inhibitory activity

Jing Ren, Min Yang, Hongchun Liu, Danyan Cao, Danqi Chen, Jian Li, Le Tang, Jianhua He, Yue-Lei Chen,* Meiyu Geng, Bing Xiong* and Jingkang Shen*

Various 3,8-diaminoimidazo[1,2-*a*]pyrazines were efficiently prepared by MCR and some products showed moderate Hsp90 inhibitory activity.

1536

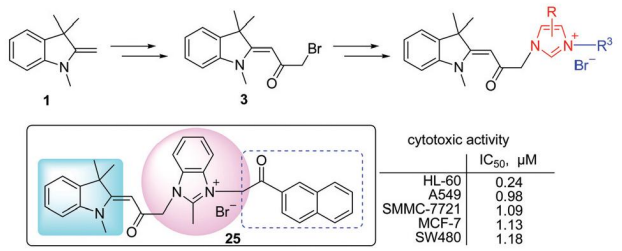



## *E*- or *Z*-Selective synthesis of 4-fluorovinyl-1,2,3-triazoles with fluorinated *second-generation* Julia–Kocienski reagents

Rakesh Kumar, Govindra Singh, Louis J. Todaro, Lijia Yang and Barbara Zajc*

*Second-generation* Julia–Kocienski reagents from CuAAC reactions of α-fluoropropargyl benzothiazole sulfone with azides, react with aldehydes and ketones to give *N*-substituted 4-(1-fluorovinyl)triazoles. Reactions of aldehydes can be tuned towards *E* or *Z*-alkenes selectively.

1550

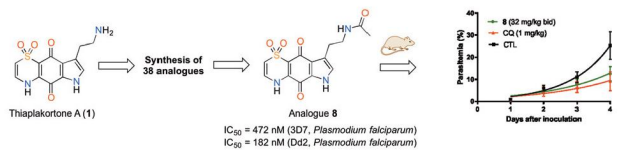



## Synthesis and antitumor activity of novel 2-substituted indoline imidazolium salt derivatives

Xiao-Liang Xu, Chun-Lei Yu, Wen Chen, Ying-Chao Li, Li-Juan Yang, Yan Li,* Hong-Bin Zhang* and Xiao-Dong Yang*

A series of novel 2-substituted indoline imidazolium salt derivatives were synthesized and their antitumor structure–activity relationship studies were reported.

1558




## Synthesis and antimalarial evaluation of amide and urea derivatives based on the thiaplakortone A natural product scaffold

B. D. Schwartz, T. S. Skinner-Adams, K. T. Andrews, M. J. Coster, M. D. Edstein, D. MacKenzie, S. A. Charman, M. Koltun, S. Blundell, A. Campbell, R. H. Pouwer, R. J. Quinn, K. D. Beattie, P. C. Healy and R. A. Davis*

A series of amide and urea analogues based on the thiaplakortone A natural product scaffold were synthesised and screened for *in vitro* antimalarial activity.

## Consecutive three-component synthesis of (hetero)arylated propargyl amides by chemoenzymatic aminolysis–Sonogashira coupling sequence

Sidra Hassan, Anja Ullrich and Thomas J. J. Müller*

(Hetero)arylated propargyl amides are efficiently prepared by consecutive chemoenzymatic three-component synthesis based upon lipase catalyzed aminolysis followed by Sonogashira coupling.