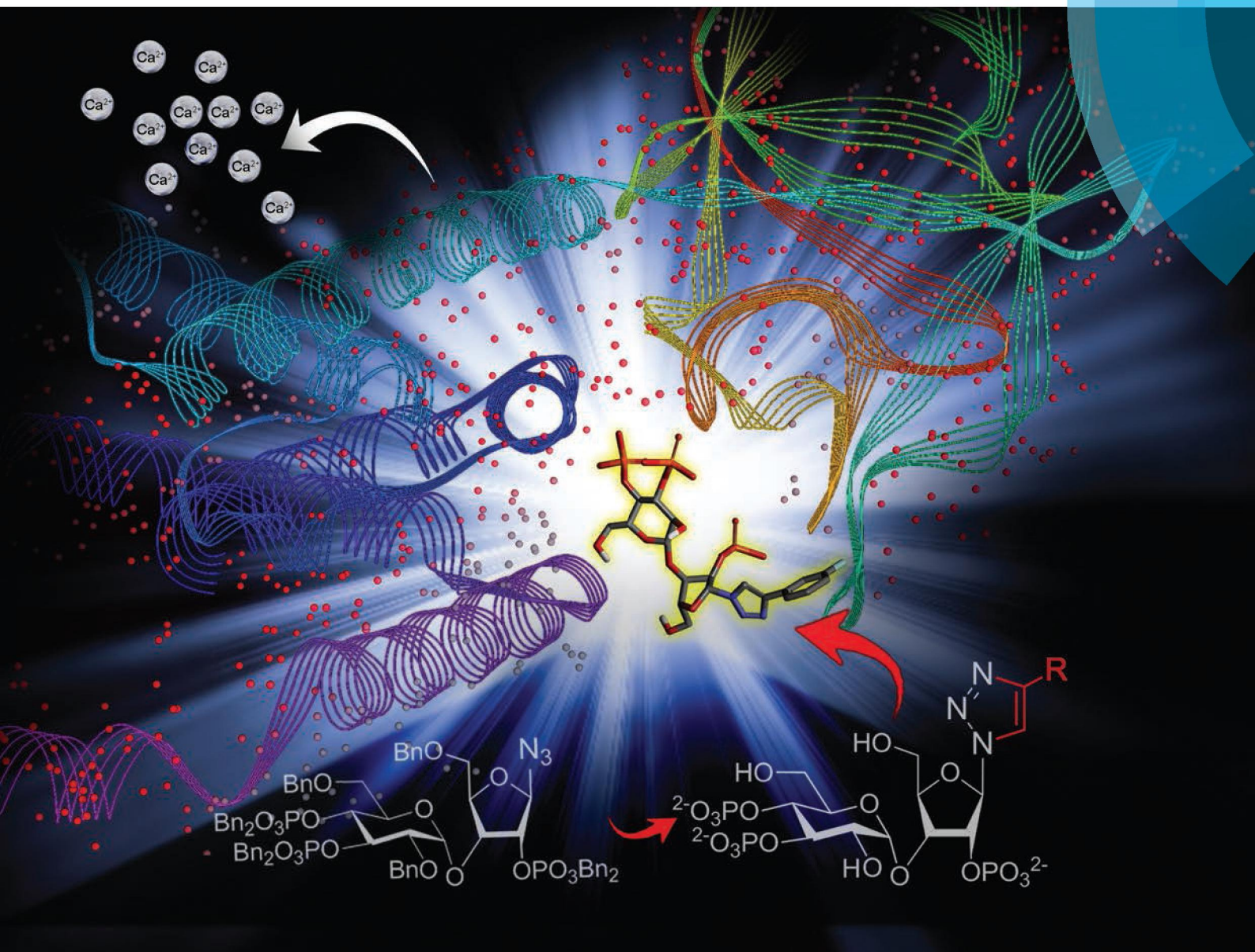


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PAPER

Kana M. Sureshan *et al.*

Triazolophostins: a library of novel and potent agonists of IP_3 receptors

Organic & Biomolecular Chemistry

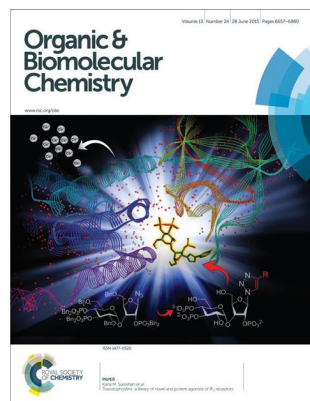
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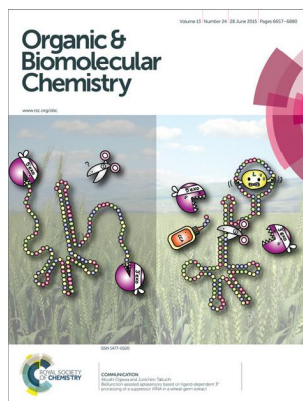
ISSN 1477-0520 CODEN OBCRAK 13(24) 6657–6880 (2015)



Cover

See Kana M. Sureshan *et al.*, pp. 6698–6710.

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Inside cover

See Atsushi Ogawa and Junichiro Tabuchi, pp. 6681–6685.

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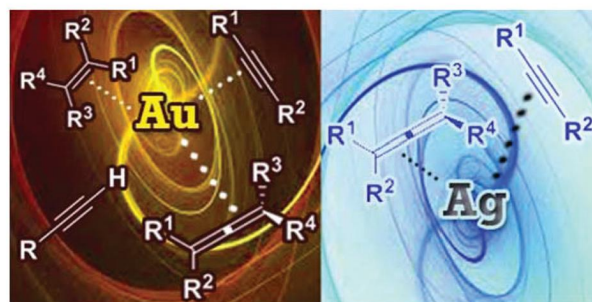
REVIEW

6667

Gold and silver catalysis: from organic transformation to bioconjugation

Vanessa Kar-Yan Lo, Anna On-Yee Chan and Chi-Ming Che*

A summary of gold (including AuNPs, Au(I) and Au(III) complexes) and silver(I) catalysis and their application in bioconjugation reactions.



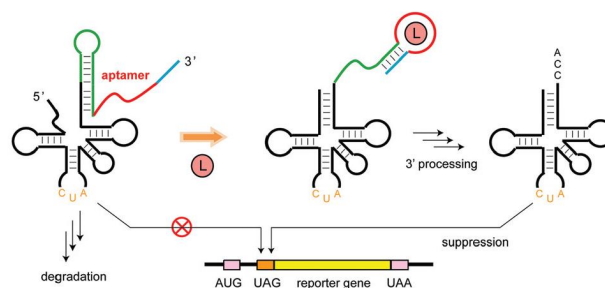
COMMUNICATIONS

6681

Biofunction-assisted aptasensors based on ligand-dependent 3' processing of a suppressor tRNA in a wheat germ extract

Atsushi Ogawa* and Junichiro Tabuchi

We developed a novel type of biofunction-assisted aptasensor that utilizes ligand-dependent maturation of a suppressor tRNA probe and the subsequent expression of a reporter gene in a wheat germ extract.



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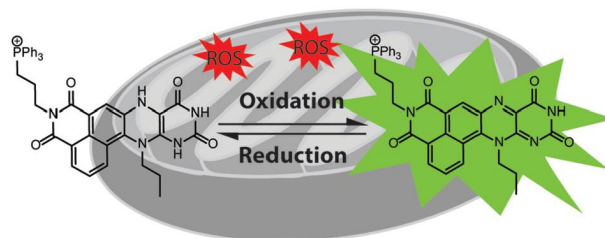
COMMUNICATIONS

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Mitochondrially targeted redox probe reveals the variations in oxidative capacity of the haematopoietic cells

Amandeep Kaur, Kurt W. L. Brigden,
Timothy F. Cashman, Stuart T. Fraser and
Elizabeth J. New*

NpFR2 is a fluorescent sensor that can reversibly measure changes in the mitochondrial redox environment.

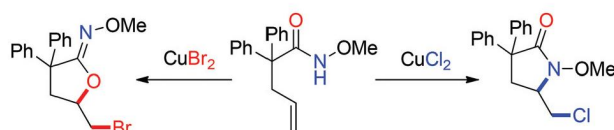


6690

CuX₂-mediated oxybromination/aminochlorination of unsaturated amides: synthesis of iminolactones and lactams

Zhi-Qiang Zhang and Feng Liu*

A CuX₂-mediated halocyclization of γ,δ -unsaturated amides for the synthesis of functionalized iminolactones and lactams respectively is described.

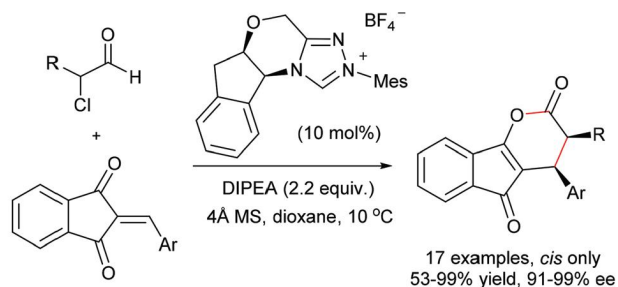


6694

Enantioselective N-heterocyclic carbene-catalyzed synthesis of indenopyrones

Kun-Quan Chen, Han-Ming Zhang, Dong-Ling Wang,
De-Qun Sun* and Song Ye*

Chiral disubstituted indenopyrones were synthesized in high yields with exclusive *cis*-selectivity and excellent enantioselectivity *via* N-heterocyclic carbene catalysis.



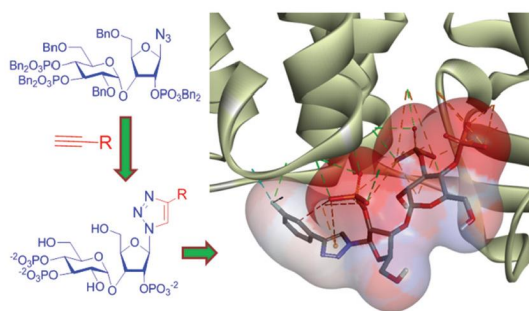
PAPERS

6698

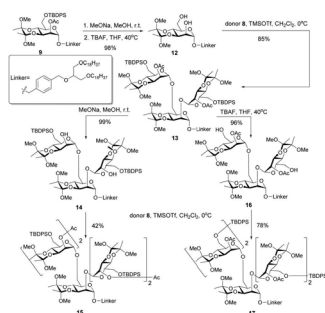
Triazolophostins: a library of novel and potent agonists of IP₃ receptors

Amol M. Vibhute, Vera Konieczny, Colin W. Taylor and
Kana M. Sureshan*

IP₃R initiate most cellular Ca²⁺ signaling. AdA is the most potent agonist of IP₃R. The structural complexity of AdA makes synthesis of its analogs cumbersome. We report an easy method for generating a library of potent triazole-based analogs of AdA, triazolophostins, which are the most potent AdA analogs devoid of a nucleobase.



6711

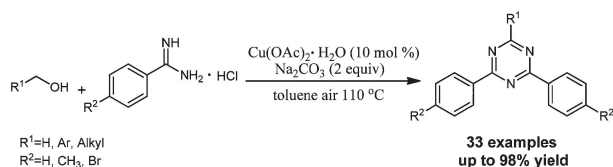


Efficient assembly of oligomannosides using the hydrophobically assisted switching phase method

Shuai Meng, Tian Tian, Dong Han, Lin-Na Wang, Shao-Geng Tang, Xiang-Bao Meng and Zhong-Jun Li*

The hydrophobically assisted switching phase (HASP) method was applied in the assembly of oligomannosides.

6723

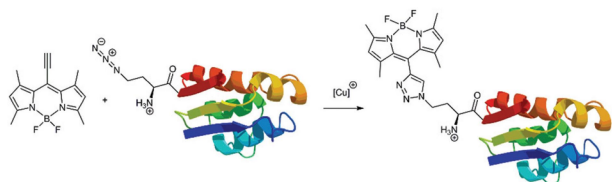


Synthesis of 1,3,5-triazines via $\text{Cu}(\text{OAc})_2$ -catalyzed aerobic oxidative coupling of alcohols and amidine hydrochlorides

Qing You, Fei Wang, Chaoting Wu, Tianchao Shi, Dewen Min, Huajun Chen and Wu Zhang*

1,3,5-Triazines were obtained via $\text{Cu}(\text{OAc})_2$ catalyzed reaction of benzamidine hydrochlorides and alcohols in air.

6728



Site-specific conjugation of 8-ethynyl-BODIPY to a protein by [2 + 3] cycloaddition

Marcel Albrecht, Andreas Lippach, Matthias P. Exner, Jihene Jerbi, Michael Springborg, Nediljko Budisa and Gerhard Wenz*

We report a straightforward synthesis of 8-ethynyl-BODIPY derivatives and their potential as fluorescent labeling compounds using an alkyne–azide click chemistry approach.

6737



An iodine catalyzed metal free domino process for the stereoselective synthesis of oxygen bridged bicyclic ethers

B. V. Subba Reddy,* B. Someswarao, N. Prudhviraju, B. Jagan Mohan Reddy, B. Sridhar and S. Kiran Kumar

A domino cyclization of 4-(2-hydroxyethyl)cyclohex-3-enol with aldehydes using 10 mol% molecular iodine is reported to produce oxygen bridged bicyclic ethers in good yields with high selectivity.

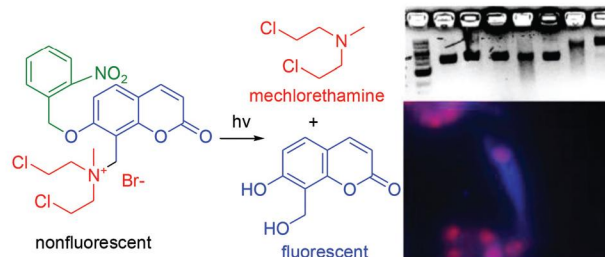
PAPERS

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Photo-triggered fluorescent theranostic prodrugs as DNA alkylating agents for mechlorethamine release and spatiotemporal monitoring

Yanting Cao, Rong Pan, Weimin Xuan, Yongyi Wei, Kejian Liu,* Jiahong Zhou* and Wei Wang*

A theranostic prodrug for mechlorethamine has been developed for photo-controlled release and monitoring by fluorescence spectroscopy.

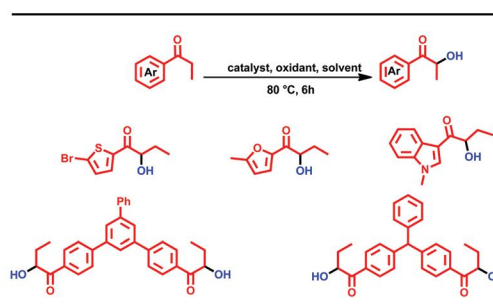


6749

Iodine promoted α -hydroxylation of ketones

Yogesh Siddaraju and Kandikere Ramaiah Prabhu*

A novel method for α -hydroxylation of ketones using substoichiometric amount of iodine under metal-free conditions is described.

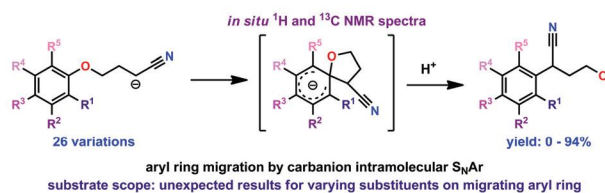


6754

Truce–Smiles rearrangement of substituted phenyl ethers

Joel R. Kosowan, Zemane W'Giorgis, Ravneet Grewal and Tabitha E. Wood*

This study of the Truce–Smiles rearrangement has revealed interesting tandem reactions, unprecedented systematic substituent effects, and new mechanistic insight.

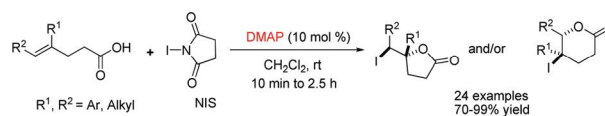


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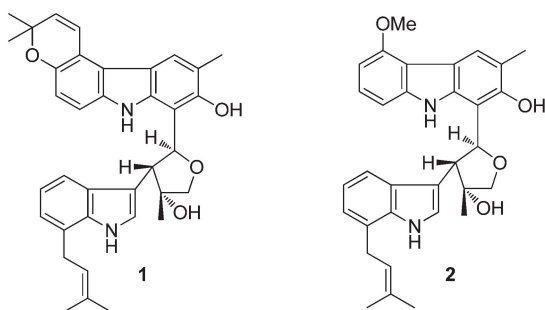
4-(Dimethylamino)pyridine-catalysed iodolactonisation of γ,δ -unsaturated carboxylic acids

Chuisong Meng, Zihui Liu, Yuxiu Liu* and Qingmin Wang*

4-(Dimethylamino)pyridine functioned as an excellent catalyst for iodolactonization reactions of γ,δ -unsaturated carboxylic acids, affording γ -lactones, δ -lactones, or both.



6773

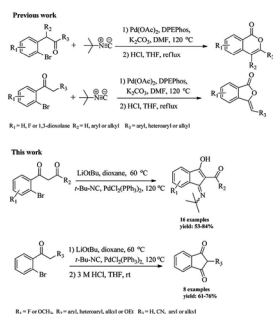


Glycosmisines A and B: isolation of two new carbazole–indole-type dimeric alkaloids from *Glycosmis pentaphylla* and an evaluation of their antiproliferative activities

Yu Chen, Chu Tang, Yi Wu, Shasha Mo, Sha Wang, Guangzhong Yang* and Zhinan Mei*

Two unique carbazole–indole-type dimeric alkaloids, glycosmisines A (**1**) and B (**2**), have been isolated from the stems of *Glycosmis pentaphylla* and their structures are elucidated by 1D and 2D NMR analyses).

6782

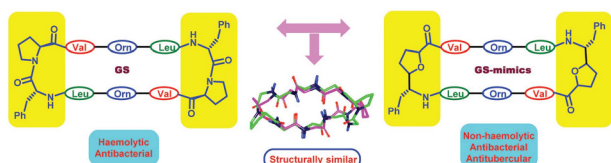


Palladium-catalyzed chemoselective synthesis of indane-1,3-dione derivatives via *tert*-butyl isocyanide insertion

Huaqing Duan, Zhong Chen, Li Han, Yulin Feng, Yongming Zhu* and Shilin Yang*

A simple and efficient strategy for the synthesis of indane-1,3-dione derivatives through a palladium(0)-catalyzed reaction incorporating *tert*-butyl isocyanide has been developed.

6789

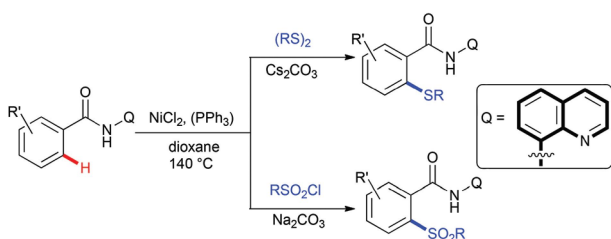


Tetrahydrofuran amino acid-containing gramicidin S analogues with improved biological profiles

Sudip Pal, Gajendra Singh, Shyam Singh, Jitendra Kumar Tripathi, Jimut Kanti Ghosh, Sudhir Sinha,* Ravi Sankar Ampapathi* and Tushar Kanti Chakraborty*

Replacement of the *D*-Phe-Pro units of GS with novel C_6 -Bn-substituted tetrahydrofuran amino acid minimized its cytotoxicity while preserving its antimicrobial activity, with a few analogs showing selective anti-TB activity as well.

6803



Nickel-catalyzed synthesis of diarylsulfides and sulfones via C–H bond functionalization of arylamides

Vutukuri Prakash Reddy, Renhua Qiu, Takanori Iwasaki and Nobuaki Kambe*

The sulfenylation and sulfonylation of (sp^2)C–H bonds of benzamides were achieved with the aid of a bidentate directing group.

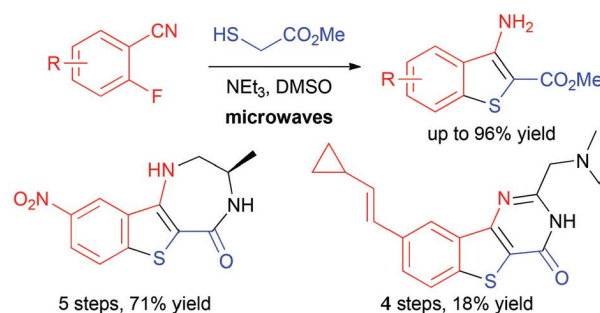
PAPERS

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Microwave-assisted synthesis of 3-aminobenzo[*b*]-thiophene scaffolds for the preparation of kinase inhibitors

Mark C. Bagley,* Jessica E. Dwyer, Maria D. Beltran Molina, Alexander W. Rand, Hayley L. Rand and Nicholas C. O. Tomkinson

Microwave-assisted synthesis of 3-aminobenzo[*b*]-thiophenes has been applied to 3 kinase inhibitor scaffolds.

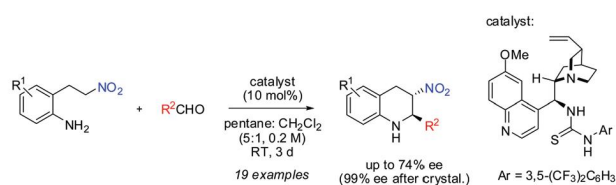


6825

Organocatalytic asymmetric intramolecular aza-Henry reaction: facile synthesis of *trans*-2,3-disubstituted tetrahydroquinolines

Rajendra Maity and Subhas Chandra Pan*

An enantio- and diastereoselective synthesis of *trans*-2-aryl-3-nitro-tetrahydroquinolines has been developed via an intramolecular aza-Henry reaction using tertiary amine thiourea as a catalyst.

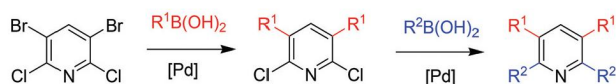


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Synthesis of tetraarylpyridines by chemo-selective Suzuki–Miyaura reactions of 3,5-dibromo-2,6-dichloropyridine

Sebastian Reimann, Silvio Parpart, Peter Ehlers, Muhammad Sharif, Anke Spannenberg and Peter Langer*

Chemoselective Suzuki–Miyaura reactions on 3,5-dibromo-2,6-dichloropyridine were studied.

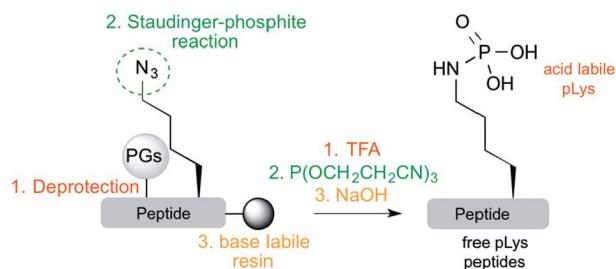


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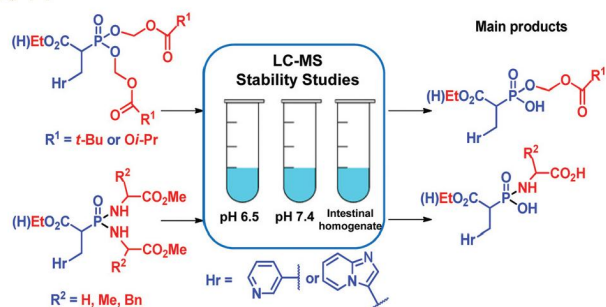
Direct access to site-specifically phosphorylated-lysine peptides from a solid-support

Jordi Bertran-Vicente, Michael Schümann, Peter Schmieder, Eberhard Krause and Christian P. R. Hackenberger*

A new synthetic approach is described for the first direct synthesis of site-specifically phosphorylated Lys peptides from solid-supported azido-peptides.



6844

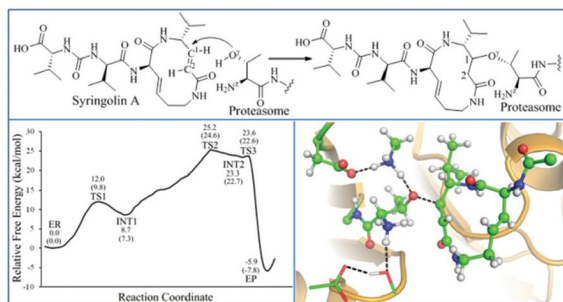


Applying the prodrug strategy to α -phosphonocarboxylate inhibitors of Rab GGTase – synthesis and stability studies

Łukasz Joachimiak, Łukasz Janczewski, Jarostaw Ciekot, Janusz Boratyński and Katarzyna Błażewska*

First prodrug-like analogs of highly ionic inhibitors of RGGT were obtained and their chemical and enzymatic stability was evaluated.

6857

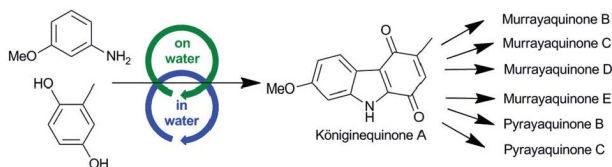


Fundamental reaction pathway and free energy profile of proteasome inhibition by syringolin A (SylA)

Donghui Wei, Mingsheng Tang and Chang-Guo Zhan*

First-principles QM/MM-FE calculations led to understanding the detailed mechanism of the inhibition reaction of proteasome with SylA.

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Synthesis of carbazoloquinone natural products 'on-water'

P. Norcott and C. S. P. McErlean*

The total synthesis of a number of carbazolo-1,4-quinone natural products using on-water chemistry is described.