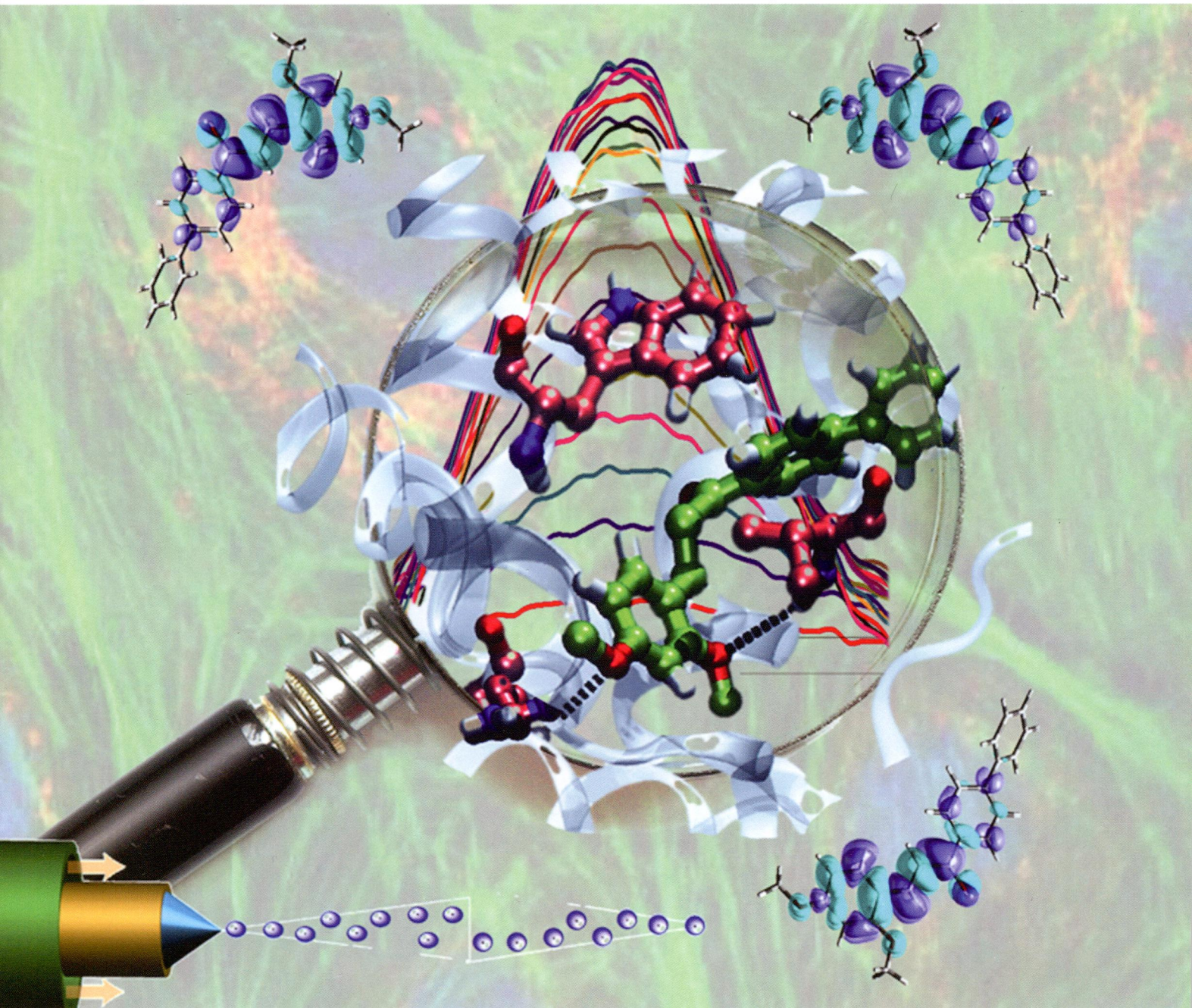


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PAPER

Wender A. Silva, Brenno A. D. Neto *et al.*

Probing deep into the interaction of a fluorescent chalcone derivative and bovine serum albumin (BSA): an experimental and computational study



1477-0520 (2013) 11:29;1-4

Organic & Biomolecular Chemistry

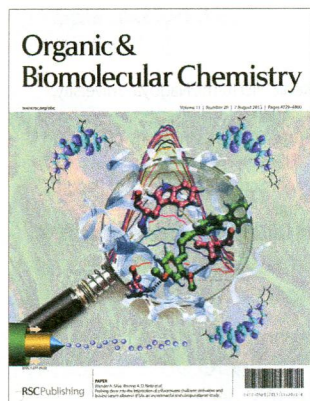
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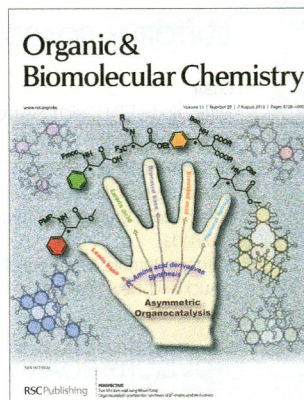
ISSN 1477-0520 CODEN OBCRAK 11(29) 4729–4900 (2013)



Cover

See Wender A. Silva, Brenno A. D. Neto *et al.*, pp. 4764–4777.

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Inside cover

See Sun Min Kim and Jung Woon Yang *et al.*, pp. 4737–4749.

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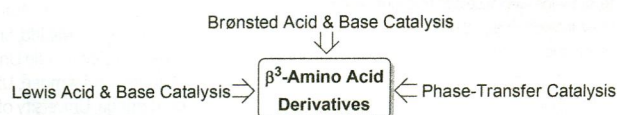
PERSPECTIVE

4737

Organocatalytic asymmetric synthesis of β^3 -amino acid derivatives

Sun Min Kim and Jung Woon Yang*

β^3 -Amino acid derivatives are an essential resource for pharmaceutical production, medicinal chemistry, and biochemistry. In this article, recent developments in versatile organocatalysis for asymmetric synthesis of β^3 -amino acid derivatives will be presented.



COMMUNICATIONS

4750

Investigation of the origin and synthetic application of the pseudodilution effect for Pd-catalyzed macrocyclisations in concentrated solutions with immobilized catalysts

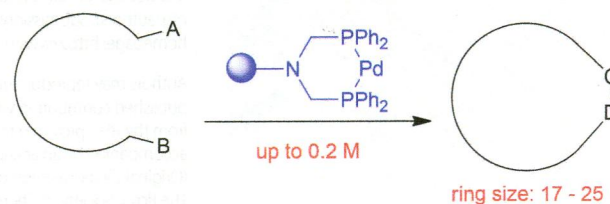
Elisabeth Brehm and Rolf Breinbauer*

The nature of the pseudodilution effect, which allows macrocyclisations at high concentrations with polymer-supported Pd-catalysts, has been investigated.

TSUJI-TROST-allylation

SUZUKI-coupling

SONOGASHIRA-coupling



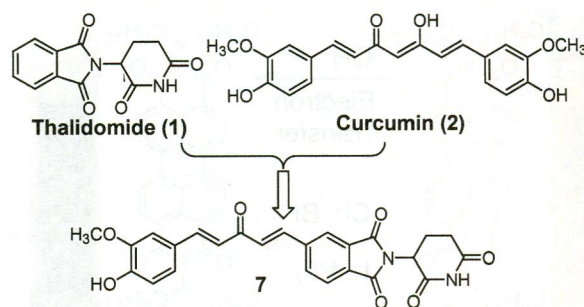
Федеральное государственное
бюджетное учреждение науки
Центральная научная библиотека
Уральского отделения
Российской академии наук (ЦНБ УРО РАН)

4757

Design and biological characterization of hybrid compounds of curcumin and thalidomide for multiple myeloma

Kai Liu, Datong Zhang, Jeremy Chojnacki, Yuhong Du, Haian Fu, Steven Grant and Shijun Zhang*

Novel hybrids of curcumin and thalidomide have been designed with significantly improved cytotoxic effects on multiple myeloma cells.



PAPERS

4764

Probing deep into the interaction of a fluorescent chalcone derivative and bovine serum albumin (BSA): an experimental and computational study

Haline G. O. Alvim, Emma L. Fagg, Aline L. de Oliveira, Heibbe C. B. de Oliveira, Sonia M. Freitas, Mary-Ann E. Xavier, Thereza A. Soares, Alexandre F. Gomes, Fabio C. Gozzo, Wender A. Silva* and Brenno A. D. Neto*

In the present manuscript, a novel fluorescent chalcone derivative is synthesized and its photophysical properties are fully characterized.

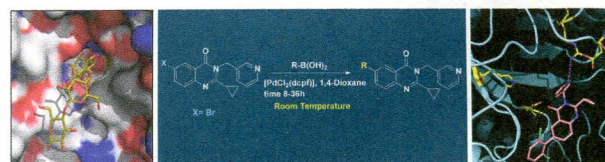


4778

Development of α -glucosidase inhibitors by room temperature C–C cross couplings of quinazolinones

Ramesh Garlapati, Narender Pottabathini,* Venkateswarlu Gurrum, Kumara Swamy Kasani, Rambabu Gundla, Chiranjeevi Thulluri, Pavan Kumar Machiraju, Avinash B. Chaudhary, Uma Addepally, Raveendra Dayam, Venkata Rao Chunduri and Balaram Patro

Novel quinazolinone based α -glucosidase inhibitors have been developed using a virtual screening model.

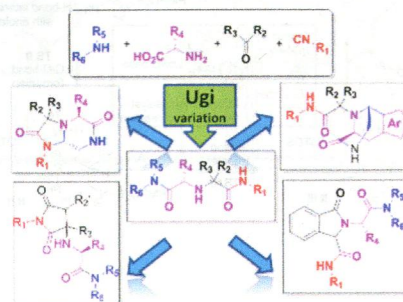


4792

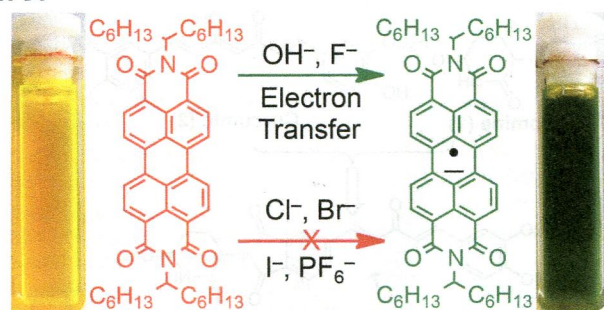
Various cyclization scaffolds by a truly Ugi 4-CR

Mantosh K. Sinha, Kareem Khoury, Eberhardt Herdtweck and Alexander Dömling*

Utilizing a newly discovered Ugi variation, we present various methods to produce four diverse heterocyclic scaffolds.



4797

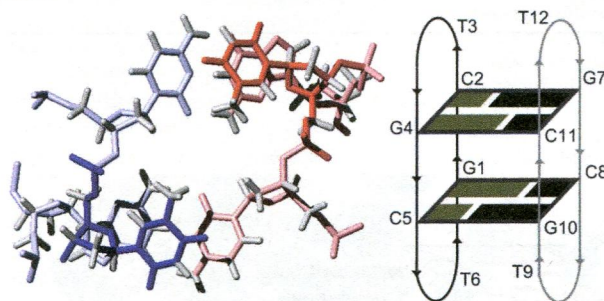


Tunable electronic interactions between anions and perylenediimide

Flynt S. Goodson, Dillip K. Panda, Shuvasree Ray, Atanu Mitra, Samit Guha and Sourav Saha*

In aprotic solvents, electron deficient perylenediimide (**PDI-1**) is reduced to **PDI-1^{•-}** radical anions by strong Lewis basic hydroxide and fluoride anions, but remains silent to less basic chloride, bromide, iodide, and hexafluorophosphate ions.

4804

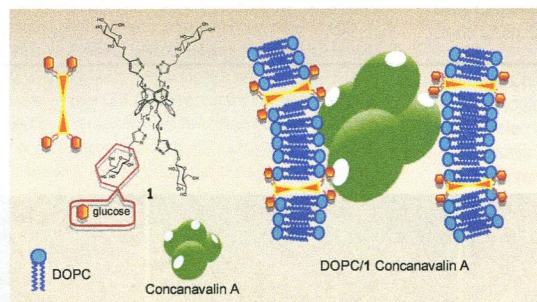


The effect of loop residues in four-stranded dimeric structures stabilized by minor groove tetrads

Núria Escaja, Irene Gómez-Pinto, Júlia Viladoms, Enrique Pedrosa* and Carlos González*

Two-residue loops are optimal for the formation of four-stranded dimeric structures stabilized by minor groove tetrads.

4811

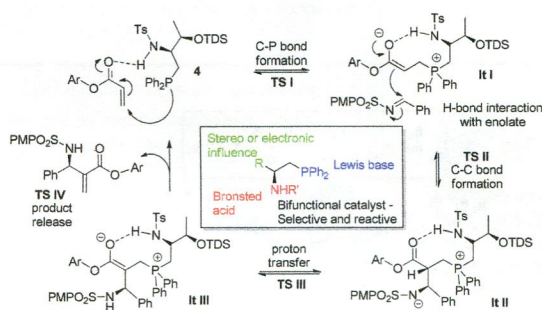


Incorporation of a calixarene-based glucose functionalised bolaamphiphile into lipid bilayers for multivalent lectin recognition

S. Aleandri, A. Casnati, L. Fantuzzi, G. Mancini,* G. Rispoli and F. Sansone*

The incorporation of a new glucosylated bolaamphiphile into DOPC liposomes rigidifies the lipophilic bilayer, thus reducing leakage from the internal aqueous phase, and allows a multivalent interaction with Concanavalin A.

4818



The origin of enantioselectivity in the L-threonine-derived phosphine-sulfonamide catalyzed aza-Morita-Baylis-Hillman reaction: effects of the intramolecular hydrogen bonding

Richmond Lee, Fangrui Zhong, Bin Zheng, Yuezhong Meng, Yixin Lu* and Kuo-Wei Huang*

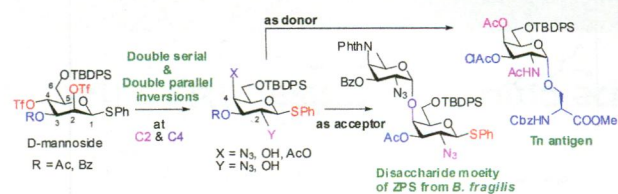
The intramolecular N-H...O H-bond was identified to be crucial in inducing a high degree of stereochemical control in both the enolate addition to imine and the subsequent proton transfer step.

4825

Orthogonally protected D-galactosamine thioglycoside building blocks via highly regioselective, double serial and double parallel inversions of β-D-thiomannoside

Madhu Emmadi and Suvarn S. Kulkarni*

An efficient route for the synthesis of orthogonally protected D-galactosamine thioglycosides from D-mannose and its application to the synthesis of the rare disaccharide moiety of the zwitterionic polysaccharide of *Bacteroides fragilis* and Tn antigen is described.

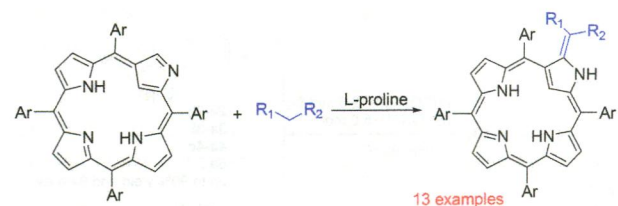


4831

L-Proline catalyzed reaction of N-confused porphyrin and active methylene compounds

Bin Liu, Xiaofang Li,* Jie Zhang and Piotr J. Chmielewski*

L-Proline catalyzes regio- and stereoselective reaction of N-confused porphyrins with acyclic active methylene compounds.

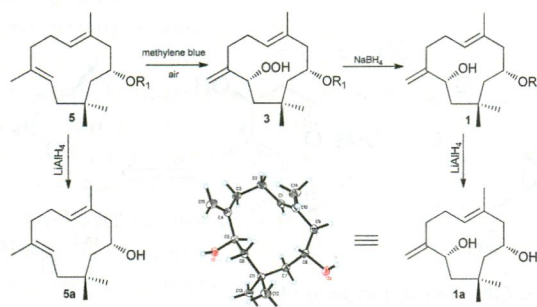


4840

Humulane-type sesquiterpenoids from *Pilea cavaleriei* subsp. *crenata*

Cang-Song Liao, Chun-Ping Tang, Sheng Yao and Yang Ye*

This paper focused on the isolation and structural elucidation of nine new and uncommon humulane-type sesquiterpenoids from *Pilea cavaleriei*.

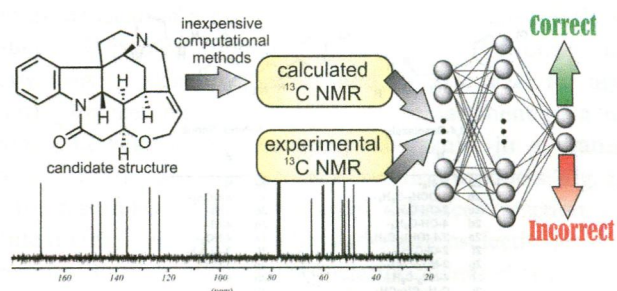


4847

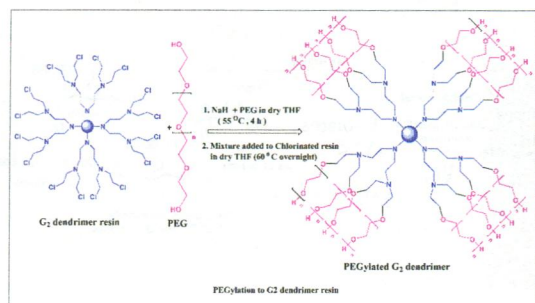
Successful combination of computationally inexpensive GIAO ¹³C NMR calculations and artificial neural network pattern recognition: a new strategy for simple and rapid detection of structural misassignments

Ariel M. Sarotti*

GIAO NMR chemical shift calculations coupled with trained artificial neural networks provides a new strategy for simple, rapid and reliable identification of structural misassignments of organic compounds.



4860

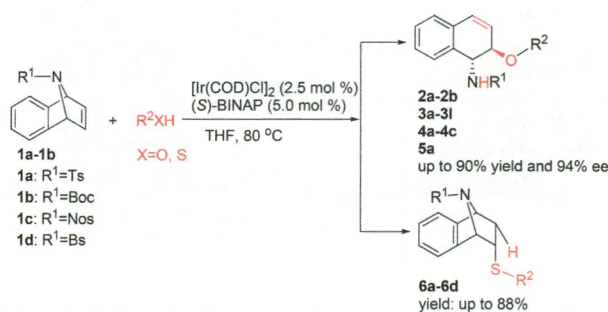


Synthetic evaluation of disulphide-bonded sarafotoxin on a poly(oxy ether) grafted dendrimeric poly(alkyl amine) support for polymer assisted organic synthesis

M. A. Siyad and G. S. Vinod Kumar*

This paper describes the synthesis, characterization and assessment of a novel class of insoluble polymeric polystyrene supports which combines polar poly(ethylene glycol)dimethacrylate as a cross-linker and poly(ethylene glycol) grafted poly(*N,N*-bisethylamine) as a dendritic template.

4871

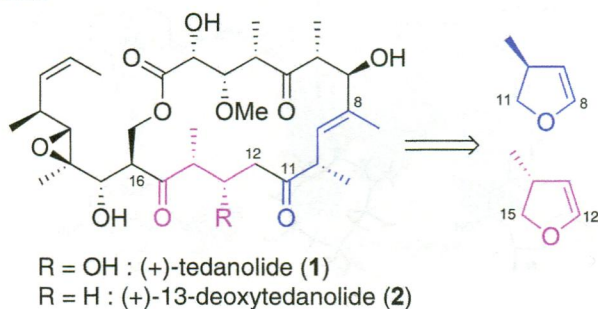


Iridium-catalyzed asymmetric ring-opening of azabicyclic alkenes with alcohols

Dingqiao Yang,* Jiuyun Xia, Yuhua Long,* Zhongyi Zeng, Xiongjun Zuo, Sanyong Wang and Chunrong Li

A novel asymmetric ring-opening reaction of *N*-substituted azabenzonorbornadienes with a wide variety of substituted benzyl alcohols and the addition reaction of *N*-substituted azabenzonorbornadienes with thiols are reported.

4882

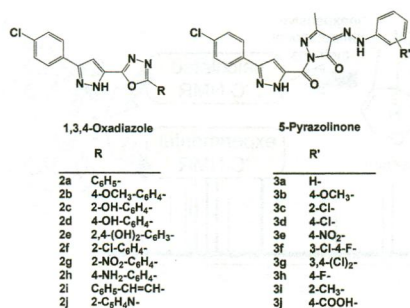


Directed studies towards the total synthesis of (+)-13-deoxytedanolide: simple and convenient synthesis of the C8–C16 fragment

Sébastien Meiries, Alexandra Bartoli, Mélanie Decostanzi, Jean-Luc Parrain* and Laurent Commeiras*

A straightforward synthesis for enantioenriched C8-C16 south part of (+)-13-deoxytedanolide has been reported.

4891



Synthesis and biological evaluation of 3-(4-chlorophenyl)-4-substituted pyrazole derivatives

P. Horrocks, M. R. Pickard, H. H. Parekh, S. P. Patel and Ravindra B. Pathak*

A series of 3-(4-chlorophenyl)-4-substituted pyrazole derivatives were synthesised. These compounds were tested for their *in vitro* antifungal and antitubercular activity. The title compounds showed potent antitubercular and antifungal activities.