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**Next Due Date:** Monday, August 15, 2016

## Instructions for Authors (Volume 1)

Identify articles to abstract in the journals you have been assigned. Try to pick things that the group (or specific subgroups) would like to read or should be aware of. This does not need to be limited to chemistry! If you encounter interesting pieces of media elsewhere (The Economist being a recent example) don't hesitate to let the group know. If you are splitting a journal with another group member, talk with him/her to be sure you are not reviewing redundantly. If you are not able to cover your journal for some reason, get someone to cover it for you—as if it were your group job.

### Create an Abstract

Abstract submissions are usually prepared using ChemDraw. The editors of the *Lit Review* strongly encourage the copying of graphical material from PDF files and wish to point out the following. Graphics stored in PDF files are typically of postscript or >300 dpi quality. When an image is copied into a ChemDraw document, a screen snapshot is taken, and the image is captured at the present screen resolution. If the PDF file is being viewed zoomed-in, this typically results in the transfer of a high quality image. If the PDF is being viewed zoomed-out, a low quality image typically results. Text can be copied from a PDF file and pasted as text using the text select or column select tool. Once pasted, this text behaves as if it were input from the keyboard.

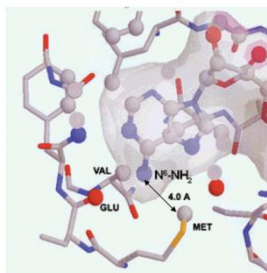
Include a brief textual summary of the article; an example of a completed abstract is shown below. The list of topics and subgroups on the right is useful to highlight which subgroups should pay attention to your abstract and roughly what kind of chemistry the article contains.

Please email the files to knear@stanford.edu. Late abstracts will be included in the Lit Review for the following month. **PCs please send .cdx and macs please send .pdf files.**

Citation: Abeyweera, T.P.; Rotenberg, S.A. *Biochemistry* 2007, 46, 2364-2370

#### Design and Characterization of a Traceable Protein Kinase C-alpha

Protein kinase CR (PKCR) is a critical component of pathways that govern cancer-related phenotypes such as invasion and proliferation. Proteins that serve as immediate substrates for PKCR offer potential targets for anticancer drug design. To identify specific substrates, a mutant of PKCR (M417A) was constructed at the ATP binding site such that it could bind a sterically large ATP analogue derivatized through the N6 amino group of adenosine (1-( $\gamma$ - $^{32}$ P)-N6-phenyl-ATP). Because this analogue could be utilized by the mutant kinase but not by wild-type PKCR (or presumably other protein kinase) to phosphorylate peptide or protein substrates,  $^{32}$ P-labeled products were the direct result of the mutant PKCR.



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Citation: Dictionary.com (search term = "mook")

For those of you who always wanted to know what it meant....

**mook** **Pronunciation Key** (mk) *n. Slang*

An insignificant or contemptible person.

*methods*  
synthesis

### DON'T BE A MOOK!

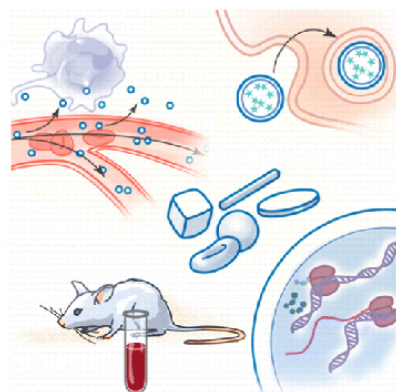
Lit Review MOOKS include those who:

- fail to submit their abstracts in a timely fashion (or at all), or
- claim there was nothing to abstract in *JACS*, *JOC*, *Org. Lett.*, etc.

Penalties for being a Lit Review MOOK:

- You will get last choice when it's time to pick new journals.

### Nanoengineered Templated Polymer Particles: Navigating the Biological Realm

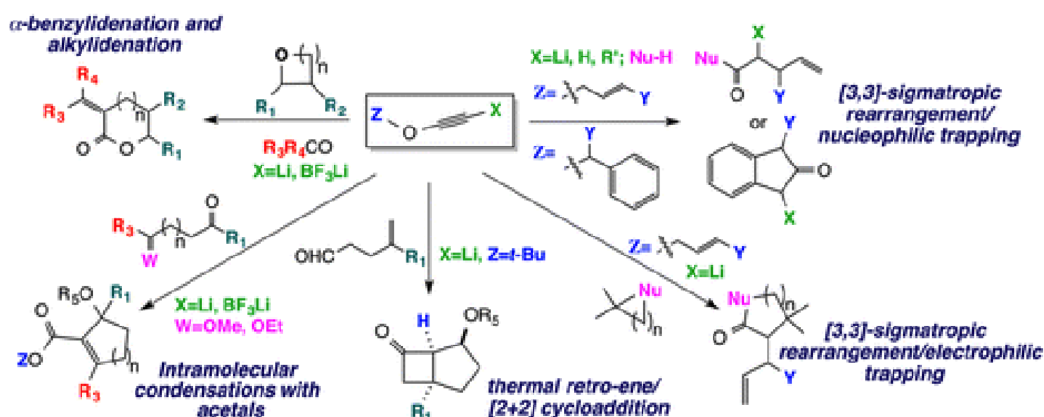


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**Drug Deliv.**  
Prostratin

Citation: Minehan, T. G. et al. *Acc. Chem. Res.* **2016**, 49, 1168-1181

### Tandem Bond-Forming Reactions of 1-Alkynyl Ethers

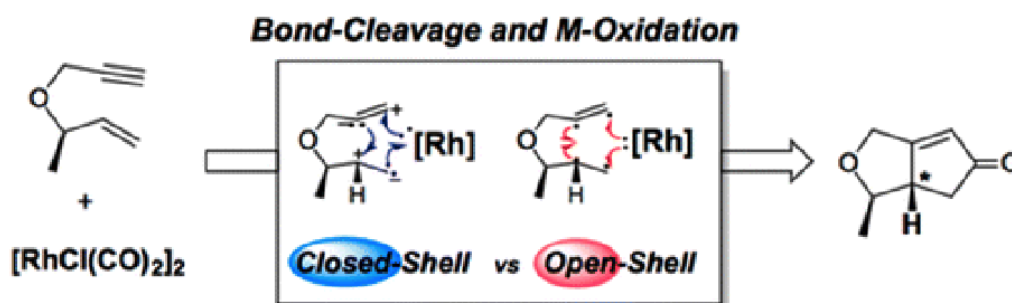


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Citation: Park, Y. et al. *Acc. Chem. Res.* **2016**, 49, 1263-1270

### Mechanism of Rh-Catalyzed Oxidative Cyclizations: Closed versus Open Shell Pathways

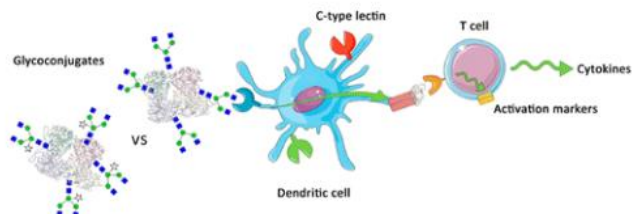


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Prostratin

Citation: Brzezicka, K. et al. *ACS Chem. Biol.* **2016**, DOI:10.1021/acscchembio.6b00265

### Influence of Core $\alpha$ -1,2-Xylosylation on Glycoprotein Recognition by Murine C-type Lectin Receptors and Its Impact on Dendritic Cell Targeting

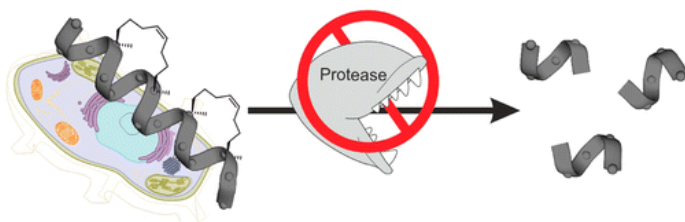


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Citation: Cromm, P. et al. *ACS Chem. Biol.* **2016**, DOI:10.1021/acscchembio.6b00386

### Protease-Resistant and Cell-Permeable Double-Strapped Peptides Targeting the Rab8a GTPase

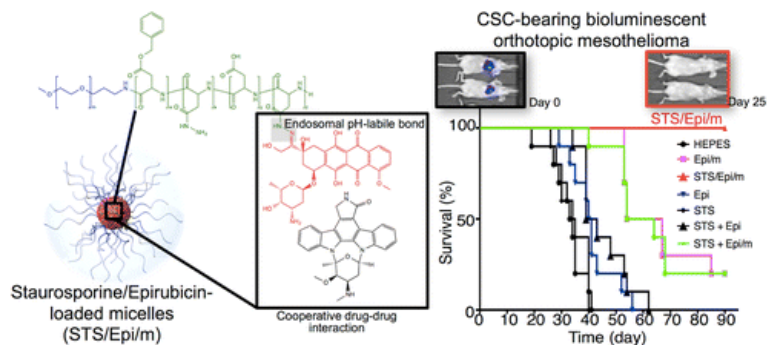


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Citation: Kinoh, H. et al. *ACS Nano*, **2016**, 10 (6) 5643-5655

### Nanomedicines Eradicating Cancer Stem-like Cells in Vivo by pH-Triggered Intracellular Cooperative Action of Loaded Drugs

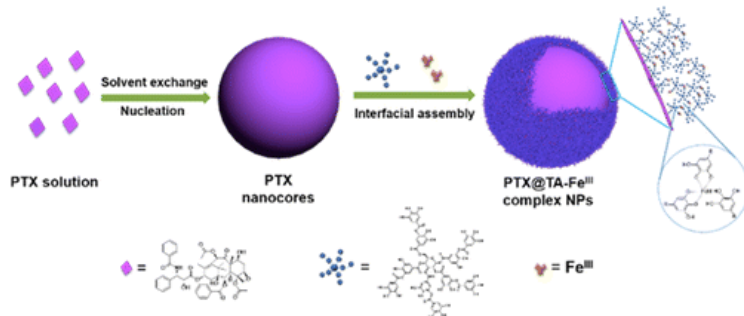


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Citation: Shen, G. et. al, *ACS Nano*, 2016, 10 (6) 5720-5729

### Interfacial Cohesion and Assembly of Bioadhesive Molecules for Design of Long-Term Stable Hydrophobic Nanodrugs toward Effective Anticancer Therapy



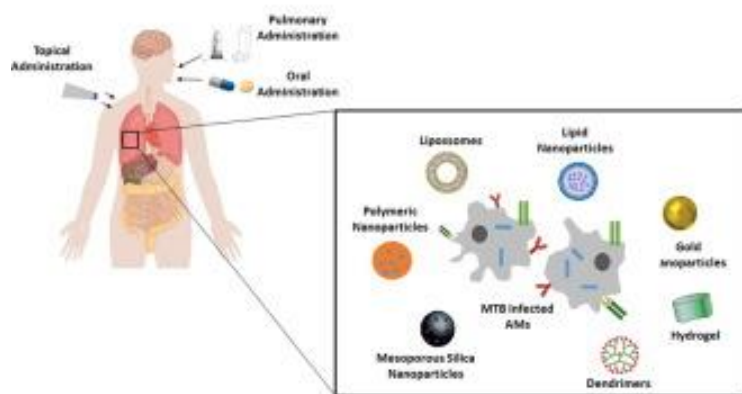
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Prostratin

Citation: *Adv. Drug Deliv. Rev.*; 2016, 102, 102.

### The formulation of nanomedicines for treating tuberculosis

Non-invasive Nanosystems for Anti-tuberculosis Drug Delivery



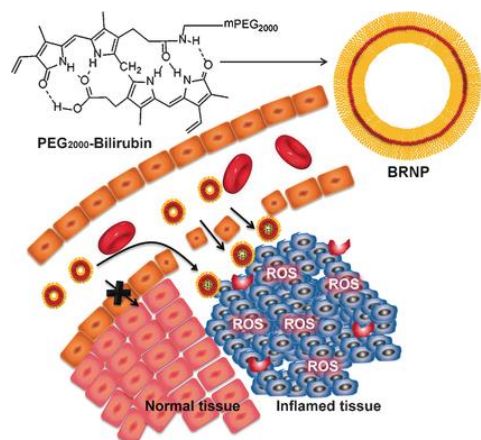
Recent advances and emerging technologies in nanoscale systems, particularly NPs have the potential to transform the approach to human health and disease.

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Citation: Lee, Y. et al. *Angew. Chem Int. Ed.* 2016, 55, 7460-7463.

### Bilirubin Nanoparticles as a Nanomedicine for Anti-inflammation Therapy



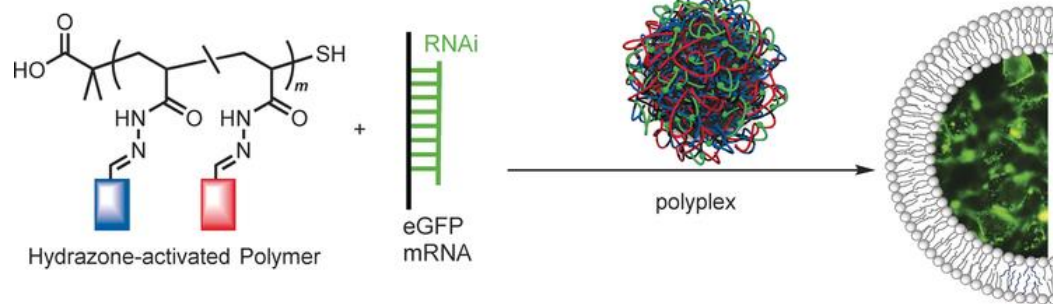
**Bilirubin, a nanomedicine** for inflammatory diseases: Bilirubin, a highly potent anti-inflammatory but extremely water insoluble compound, is converted into nanoparticles by simply introducing PEG. The resultant bilirubin nanoparticles show potential as a nanomedicine in anti-inflammation therapy. ROS=reactive oxygen species, BRNP=Bilirubin nanoparticle.

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Citation: Priegue, H. M. et al. *Angew. Chem Int. Ed.* **2016**, *55*, 7492-7495.

### In Situ Functionalized Polymers for siRNA Delivery

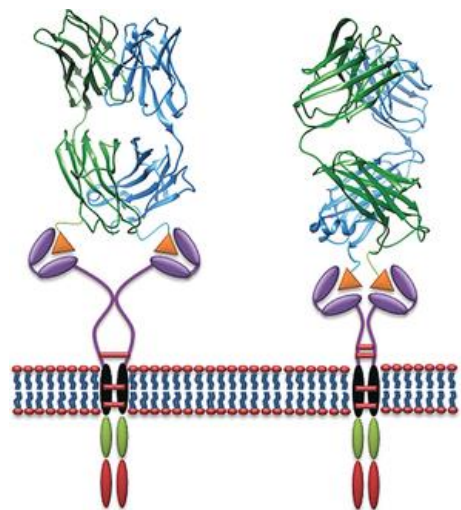


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Citation: Cao, Y. et al. *Angew. Chem Int. Ed.* **2016**, *55*, 7520-7524.

### Design of Switchable Chimeric Antigen Receptor T Cells Targeting Breast Cancer



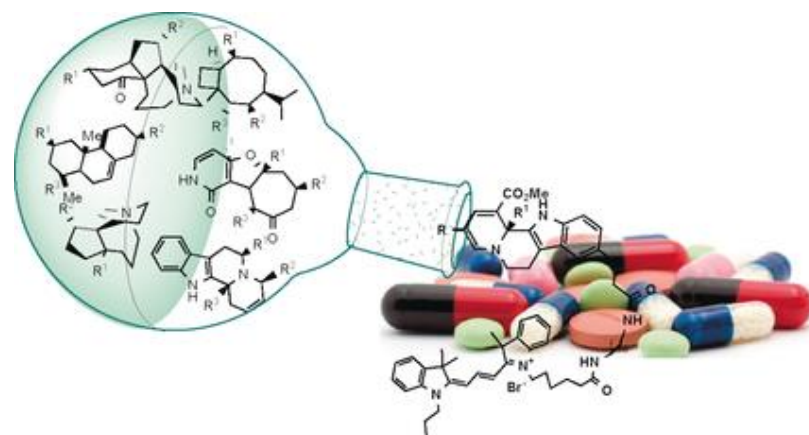
**CAR-T control:** Chimeric antigen receptor T (CAR-T) cells were engineered to be controlled by exogenous switch molecules. Site-specific incorporation of the small molecule FITC or a short peptide neo-epitope in the anti-Her2 4D5 Fab allowed activation of corresponding switchable CAR-T cells towards Her2-expressing solid tumor cells, and displayed significant anti-cancer effects both in vitro and in vivo.

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Citation: Garcia-Castro, M. et al. *Angew. Chem Int. Ed.* **2016**, *55*, 7586-7605.

### Scaffold Diversity Synthesis and Its Application in Probe and Drug Discovery

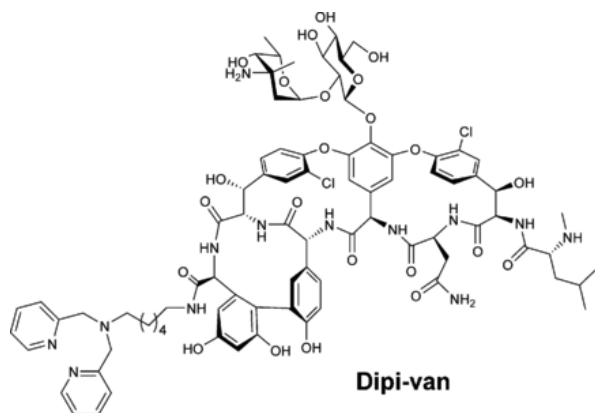


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Citation: Yarlagadda, V. et al. *Angew. Chem Int. Ed.* **2016**, *55*, 7586-7605.

### A Vancomycin Derivative with a Pyrophosphate-Binding Group: A Strategy to Combat Vancomycin-Resistant Bacteria



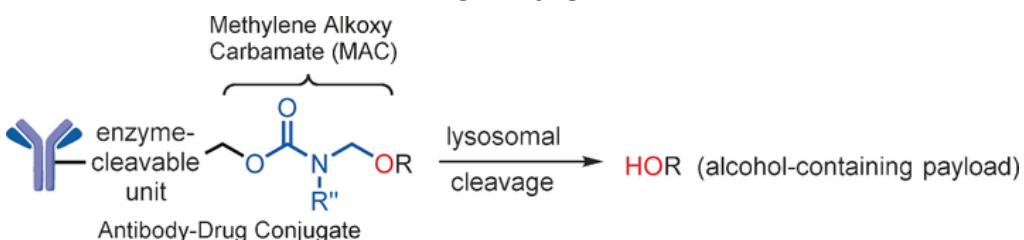
The glycopeptide antibiotic **Dipi-van**, with a zinc-binding dipicolyl moiety, is highly active against vancomycin-resistant bacteria as it binds to pyrophosphate groups of cell-wall lipids by the formation of zinc complexes while maintaining its inherent binding ability for the pentapeptide termini of cell-wall precursors. Cell-wall biosynthesis is thus inhibited.

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Citation: Kolakowski, R. W. et al. *Angew. Chem Int. Ed.* **2016**, *55*, 7948-7951.

### The Methylene Alkoxy Carbamate Self-Immolative Unit: Utilization for the Targeted Delivery of Alcohol-Containing Payloads with Antibody-Drug Conjugates



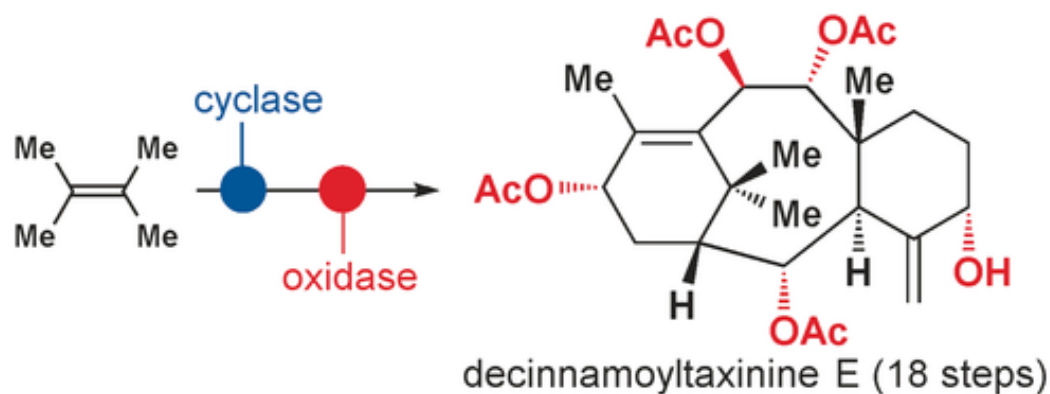
**MAC out:** A strategy for the conjugation of alcohol-containing payloads to antibodies has been developed using the methylene alkoxy carbamate (MAC) self-immolative unit. A series of MAC  $\beta$ -glucuronide model constructs were prepared and demonstrated high stability at physiological pH, and efficiently released alcohol drug surrogates under the action of  $\beta$ -glucuronidase.

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Citation: Yuan, C. et al. *Angew. Chem Int. Ed.* **2016**, *55*, 8280-8284.

### Short, Enantioselective Total Synthesis of Highly Oxidized Taxanes

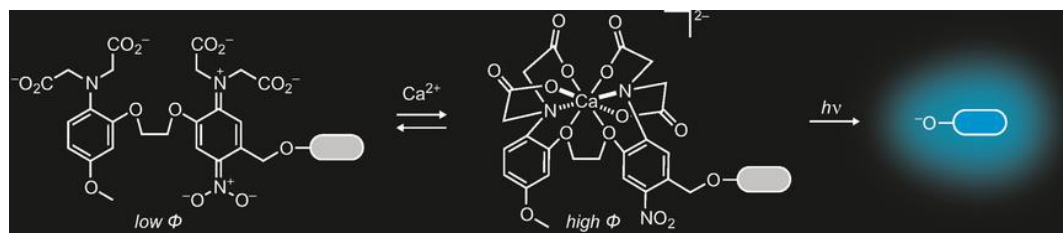


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Citation: Heckman, L. M. et al. *Angew. Chem Int. Ed.* **2016**, *55*, 8363-8366.

### Design and Synthesis of a Calcium-Sensitive Photocage



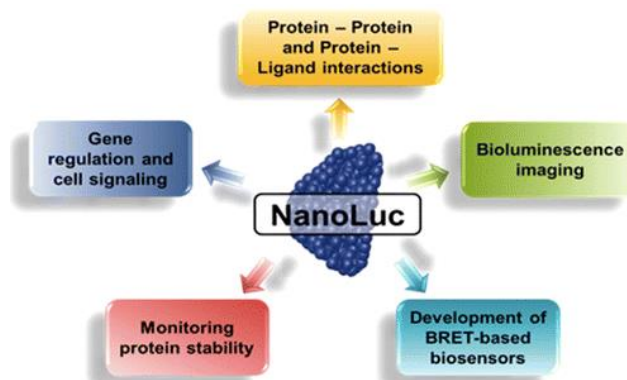
**A chemical coincidence detector:** The first  $\text{Ca}^{2+}$ -sensitive photocage, which releases a small molecule only in the presence of both light and elevated  $\text{Ca}^{2+}$  concentrations, has been synthesized. Caging a fluorophore with this ion-sensitive moiety yields a system that can permanently mark active neurons during an illumination-defined time period.

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Citation: England, C. G. *Bioconjugate chemistry* **2016**, 1175-1187.

### NanoLuc: A Small Luciferase Is Brightening Up the Field of Bioluminescence

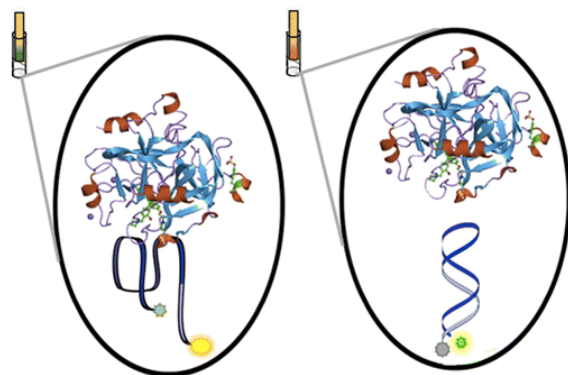


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Citation: McConnel E. M. et al.. *Bioconjugate chemistry* **2016**, 1493-1499.

### pHAST (pH-Driven Aptamer Switch for Thrombin) Catch-and-Release of Target Protein

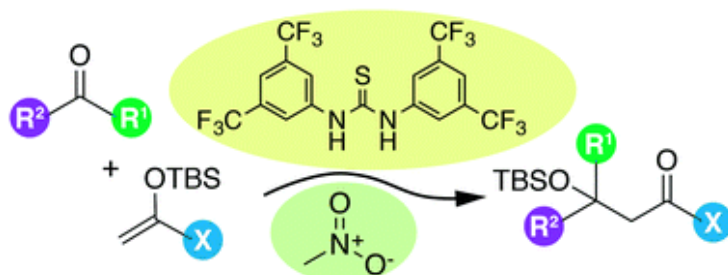


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Citation: Bukhryakov, K. V.; Desyatkin, V. G.; Rodionov, V. O. *Chem. Commun.* **2016**, 52, 7576.

### Cooperative organocatalysis of Mukaiyama-type aldol reactions by thioureas and nitro compounds



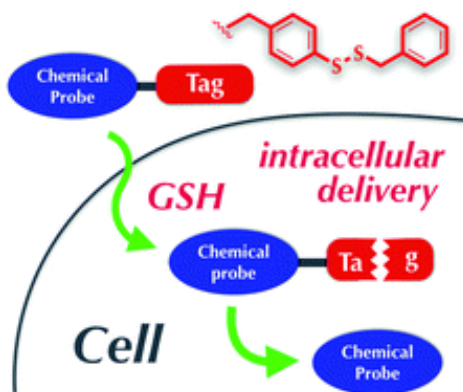
A unique organocatalytic system for Mukaiyama-type aldol reactions based on the cooperative action of nitro compounds and thioureas has been identified. This system is compatible with a wide range of substrates and does not require low temperatures, inert atmospheres, or an aqueous workup.

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Citation: Aoyama, E.; *et al. Chem. Commun.* **2016**, 52, 7715.

### Intracellular delivery of chemical probes using a glutathione-responsive traceless tag



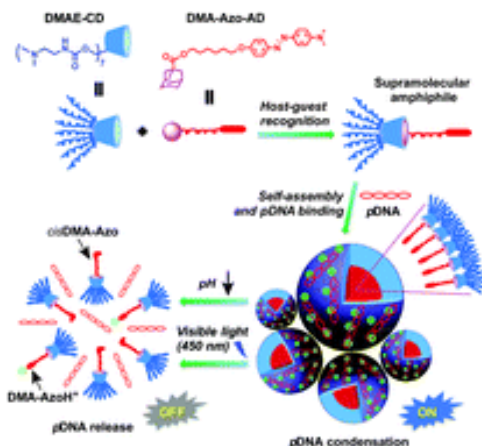
A new glutathione (GSH)-responsive traceless tag that facilitates intracellular delivery of small molecule chemical probes has been developed.

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Citation: Dong, R.; *et al. Chem. Commun.* **2016**, 52, 7950.

### Dual-responsive aggregation-induced emission-active supramolecular nanoparticles for gene delivery and bioimaging



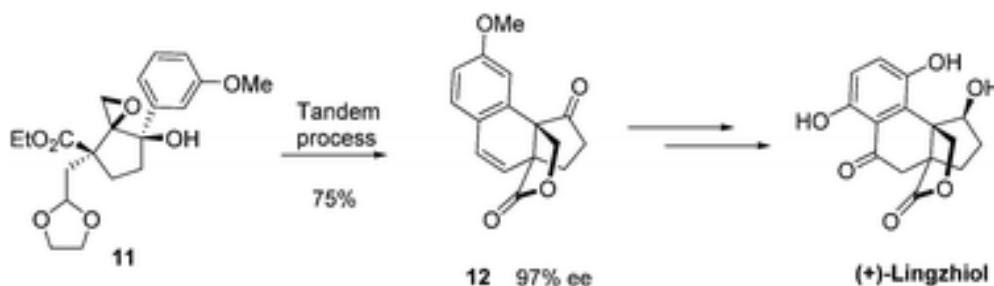
Dual-responsive aggregation-induced emission-active supramolecular fluorescent nanoparticles have the ability to undergo a unique morphological transition combining with a cooperative optical variation in response to pH and light stimuli. The dynamic supramolecular nanoparticles show excellent biocompatibility and effective plasmid DNA condensation capability, further achieving efficient in vitro gene delivery and bioimaging.

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Citation: Chen, D.; et al. *Chem. Commun.* **2016**, 52, 8561.

### Enantioselective total synthesis of (+)-Lingzhiol via tandem semipinacol rearrangement/Friedel–Crafts type cyclization



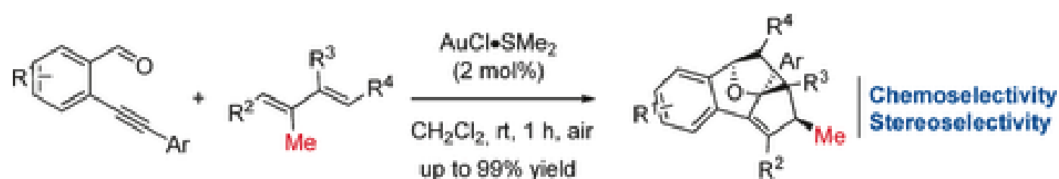
Enantioselective total synthesis of (+)-Lingzhiol has been achieved. It is the first example of in tandem semipinacol rearrangement reactions, the migrated aryl group further reacting with the carbonyl oxonium electrophile to furnish a polycyclic skeleton. Our synthesis involves 13 steps and proceeds in 6% overall yield.

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Citation: Cao, Z. et al. *Chem. Eur. J.* **2016**, 22, 9125-9129

### Gold-Catalyzed Reaction of *ortho*-Alkynylarylaldehydes with Conjugated Dienes: An Efficient Access to Highly Strained Tetracyclic Bridgehead Olefins

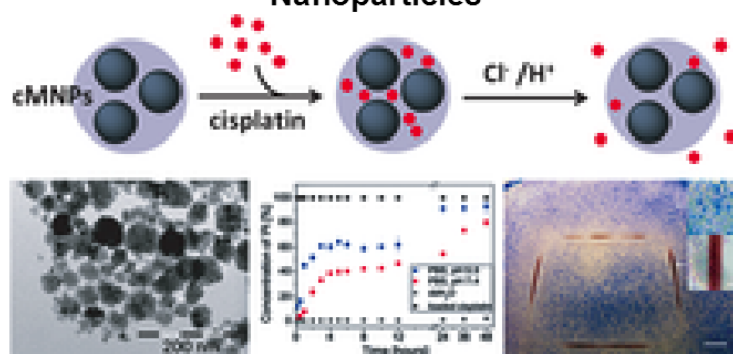


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Citation: Medrikova, Z. et al. *Chem. Eur. J.* **2016**, 22, 9750-9759

### Enhancing Tumor Cell Response to Chemotherapy through the Targeted Delivery of Platinum Drugs Mediated by Highly Stable, Multifunctional Carboxymethylcellulose-Coated Magnetic Nanoparticles

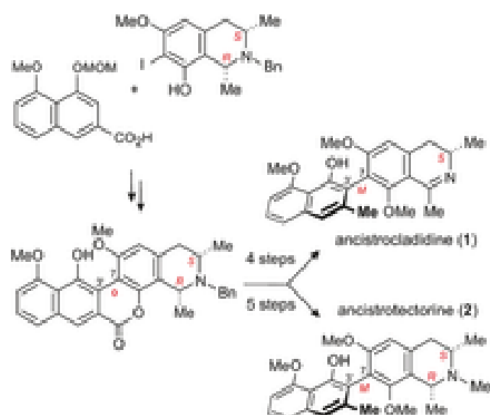


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Citation: Bringmann, G. et al. *Chem. Eur. J.* **2016**, *22*, 9792-9796

### First Atroposelective Total Synthesis of Enantiomerically Pure Ancistrocladidine and Ancistrotectorine

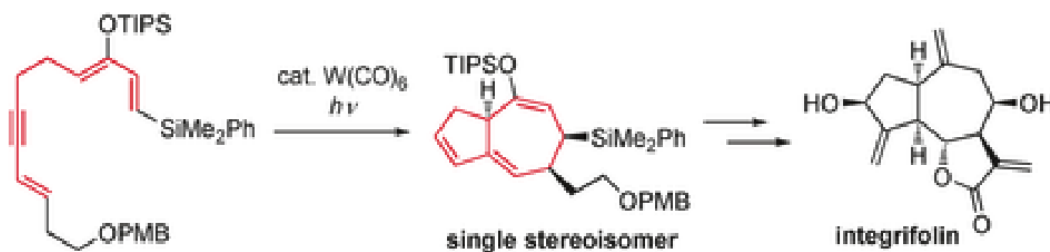


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Citation: Shimomaki, K. et al. *Chem. Eur. J.* **2016**, *22*, 9953-9957

### Total Synthesis of (+)-Integrifolin

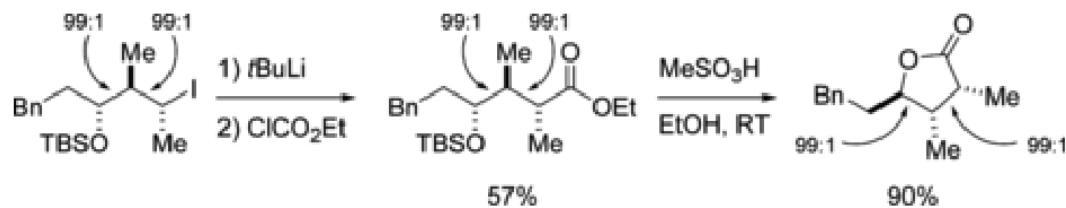


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Citation: Morozova, V. et al. *Chem. Eur. J.* **2016**, *22*, 9962-9965

### Stereoselective Synthesis and Retentive Trapping of $\alpha$ -Chiral Secondary Alkylolithiums Leading to Stereodefined $\alpha,\beta$ -Dimethyl Carboxylic Esters

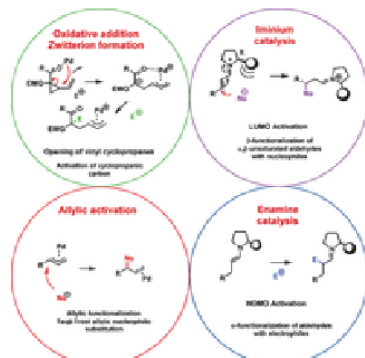


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Citation: Meazza, M. et al. *Chem. Eur. J.* **2016**, 22, 9923–9928

### Synergistic Catalysis: Enantioselective Ring Expansion of Vinyl Cyclopropanes Combining Four Catalytic Cycles for the Synthesis of Highly Substituted Spirocyclopentanes Bearing up to Four Stereocenters

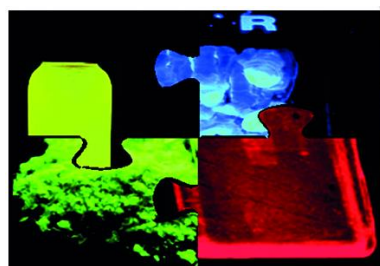


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Citation: Levi, L.; Müller, T. *European Journal of Organic Chemistry* **2016**, 17, 902–2918

### Multicomponent Syntheses of Fluorophores Initiated by Metal Catalysis

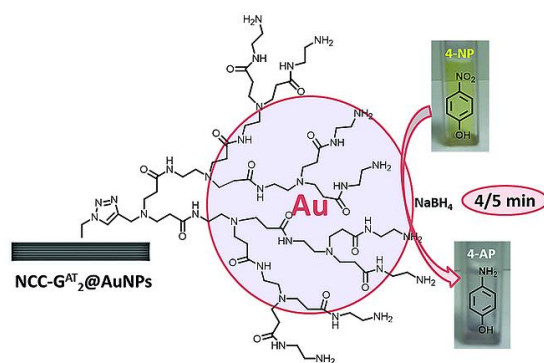


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Hybrid  
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Citation: Herreros-López, A. et al. *European Journal of Organic Chemistry* **2016**, 19, 3186–3192

### Synthesis and Catalytic Activity of Gold Nanoparticles Supported on Dendrimeric Nanocellulose Hybrids



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**An HIV Vaccine**

**Visions for an AIDS-Free Generation**



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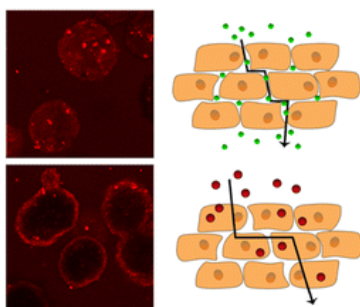
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Citation: *Mol. Pharm.*; **2016**, 13, 2155.

**Size and Surface Charge of Engineered Poly(amidoamine) Dendrimers Modulate Tumor Accumulation and Penetration: A Model Study Using Multicellular Tumor Spheroids**



G2  
G7



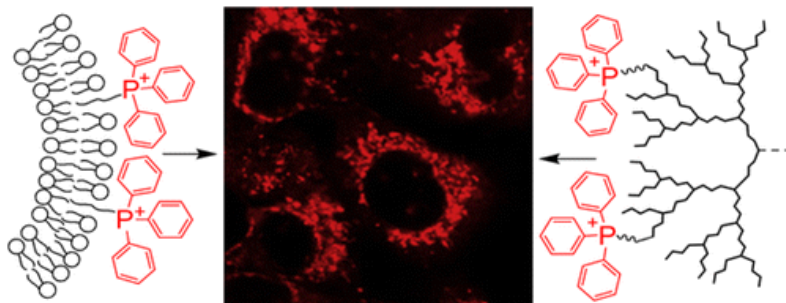
Smaller PAMAM dendrimers not only diffused more rapidly in the ECM model but also efficiently penetrated to the multicellular tumor spheroid model core compared to their larger counterparts.

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Citation: *Mol. Pharm.*; **2016**, 13, 2233.

**Triphenylphosphonium Decorated Liposomes and Dendritic Polymers: Prospective Second Generation Drug Delivery Systems for Targeting Mitochondria**



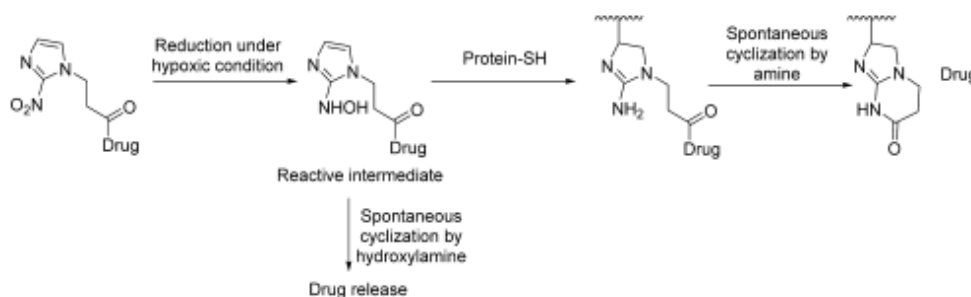
TPP is a known and effective mitochondrial targeting moiety.

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Citation: *Mol. Pharm.*; **2016**, *13*, 2283.

### Targeting and Treatment of Tumor Hypoxia by Newly Designed Prodrug Possessing High Permeability in Solid Tumors

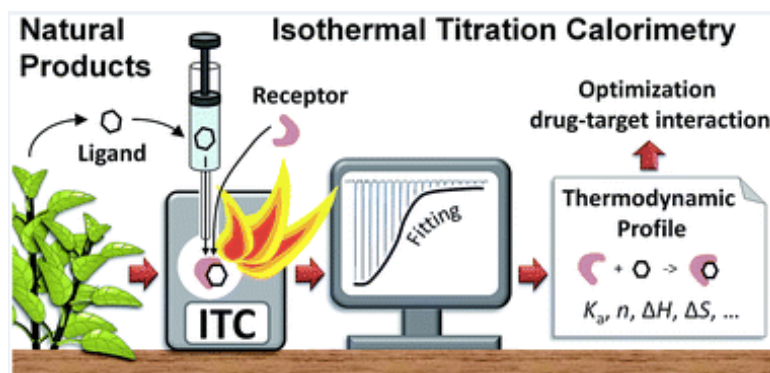


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Citation: Callies, O. et al. *Nat. Prod. Rep.*, **2016**, *33*, 881-904

### Application of isothermal titration calorimetry as a tool to study natural product interactions



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Citation: *N Engl J Med* **2016**; *374*:2605-2606

### Midostaurin in Advanced Systemic Mastocytosis

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Citation: [http://www.nytimes.com/2016/07/10/upshot/a-medical-mystery-of-the-best-kind-major-diseases-are-in-decline.html?\\_r=0](http://www.nytimes.com/2016/07/10/upshot/a-medical-mystery-of-the-best-kind-major-diseases-are-in-decline.html?_r=0)

### A Medical Mystery of the Best Kind: Major Diseases Are in Decline

Major diseases, like colon cancer, dementia and heart disease, are waning in wealthy countries, and improved diagnosis and treatment cannot fully explain it.

Of course, these diseases are far from gone. They still cause enormous suffering and kill millions each year.

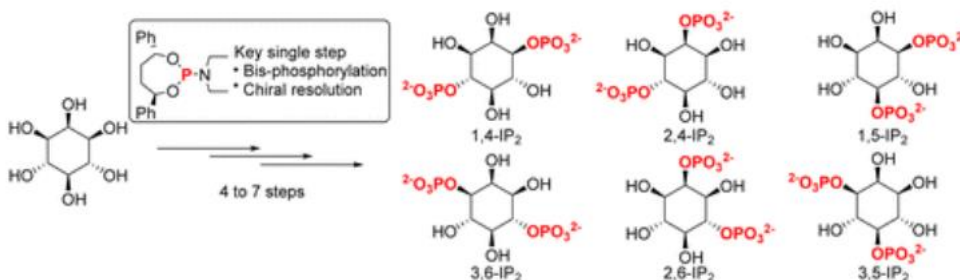
But it looks as if people in the United States and some other wealthy countries are, unexpectedly, starting to beat back the diseases of aging. The leading killers are still the leading killers — cancer, heart disease, stroke — but they are occurring later in life, and people in general are living longer in good health.

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Citation: **Org. Lett., 2016, 18 (13), pp 3162–3165** Estelle Durantie, Samuel Huwiler, Jean-Christophe Leroux, and Bastien Castagner\*

### A Chiral Phosphoramidite Reagent for the Synthesis of Inositol Phosphates

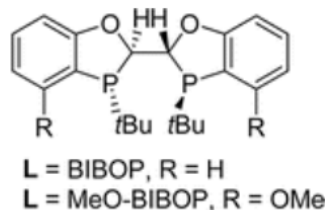
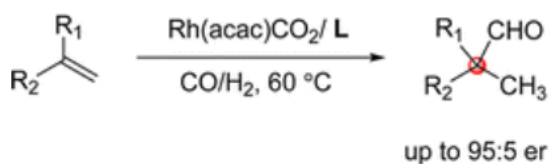


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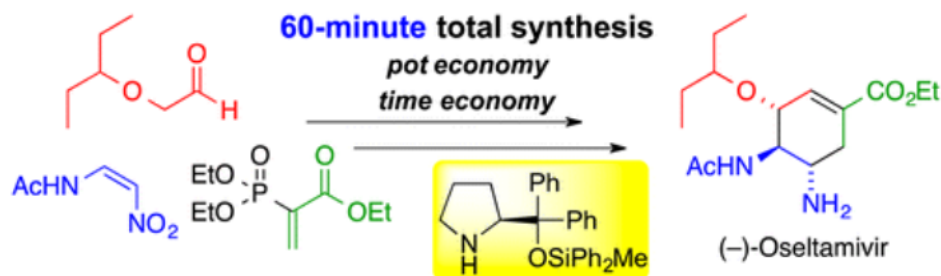
Citation: **Org. Lett., 2016, 18 (14), pp 3346–3349** Renchang Tan†, Xin Zheng†, Bo Qu†, C. Avery Sader†, Keith R. Fandrick†, Chris H. Senanayake\*†, and Xumu Zhang\*†

### Tunable P-Chiral Bis(dihydrobenzooxaphosphole) Ligands for Enantioselective Hydroformylation



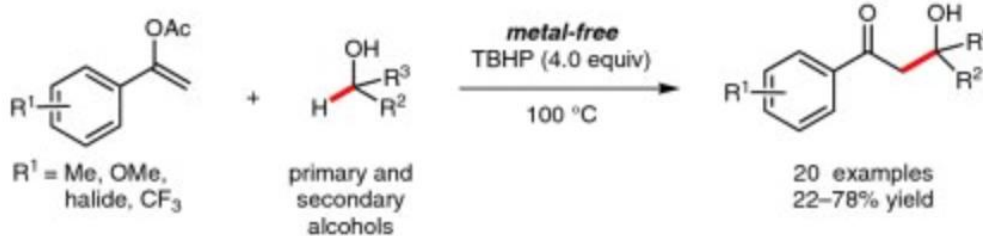
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**Time Economical Total Synthesis of (-)-Oseltamivir**

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Citation: Tang, Y.; Fan, Y.; Zhang, Y; Li, X.; Xu, X. *Synlett*. 2016, 27(12), 1860–1863**Metal-Free *tert*-Butyl Hydrogenperoxide (TBHP) Mediated Radical Alkylation of Enol Acetates with Alcohols: A New Route to beta-hydroxy ketones**

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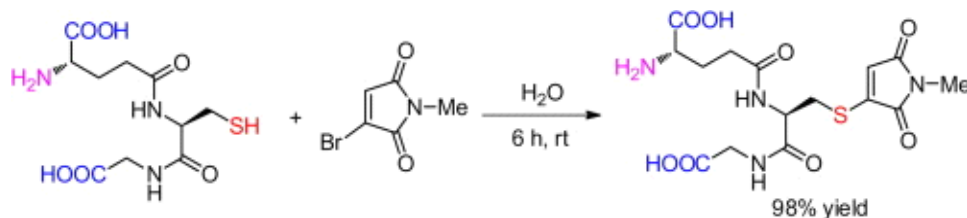
Citation: Neubert, P.; Meier, I.; Gaide, T.; & Behr, A. *Synthesis*, 2016, 48(14), 2287–2293**Additive-Free Palladium-Catalyzed Hydroamination of Piperylene with Morpholine**

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**Ingenane**

Citation: Li, X. *et al. Tet. Lett.* **2016**, 57, 2660.

### A mild and selective protecting and reversed modification of thiols

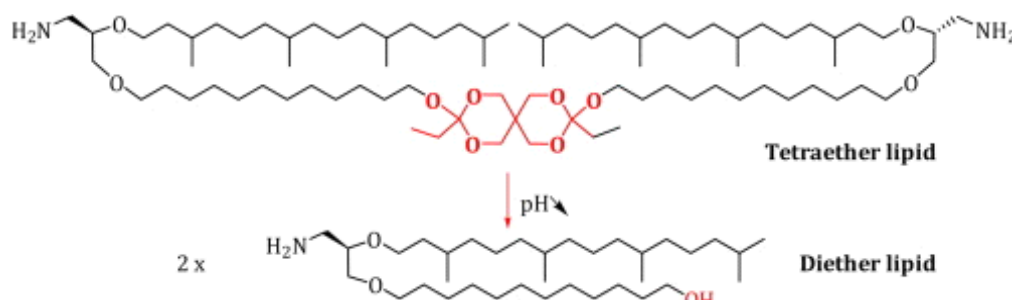


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Citation: Barbeau, J. *et al. Tet. Lett.* **2016**, 57, 2976.

### Synthesis of a novel archaeal tetraether-type lipid containing a diorthoester group as a helper lipid for gene delivery



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