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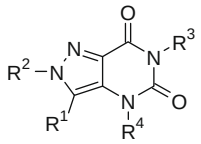
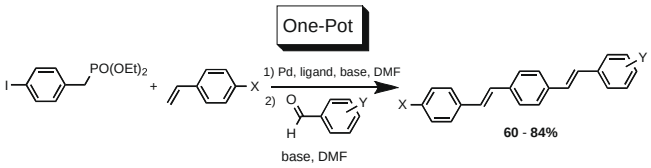
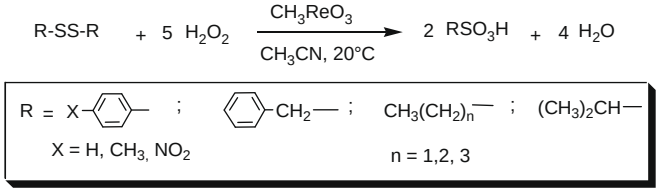
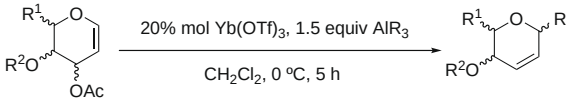
Contents

COMMUNICATIONS



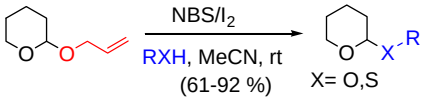




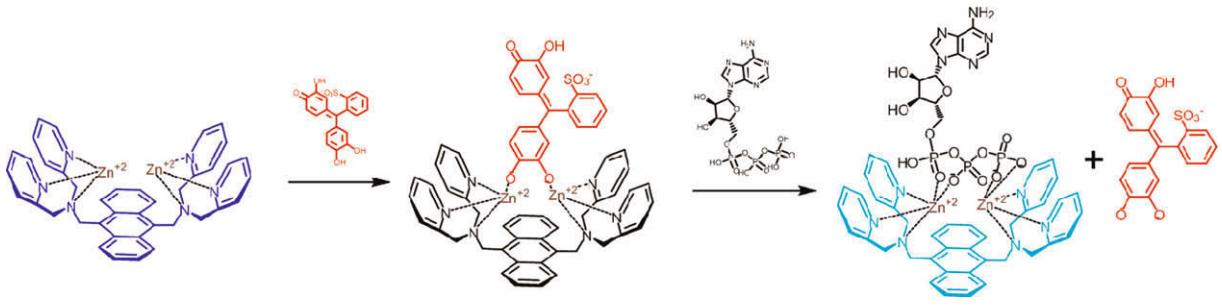


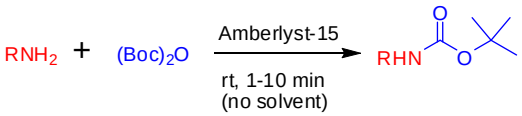
1 2

R = CH_3, CH_2CH_3
R^1 = H, CH_3, CH_2OAc, $CH_2OSi(Me)_2Bu^t$
R^2 = Ac, $Si(Me)_2Bu^t$

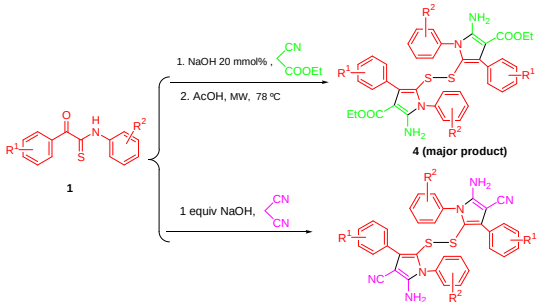


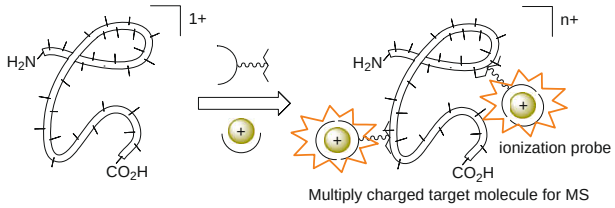
Allyl tetrahydropyranyl ether (ATHPE) can be used as a versatile protecting reagent. In combination with NBS/I_2, *O*-allyl group can easily be replaced by hydroxyls (including tertiary-OH) or thiols, in the molecules comprising other reactive functional groups such as halogen, nitro, acetonide and alkene under mild reaction conditions (near neutral pH and ambient temperature).

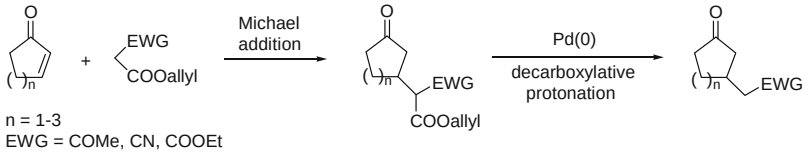


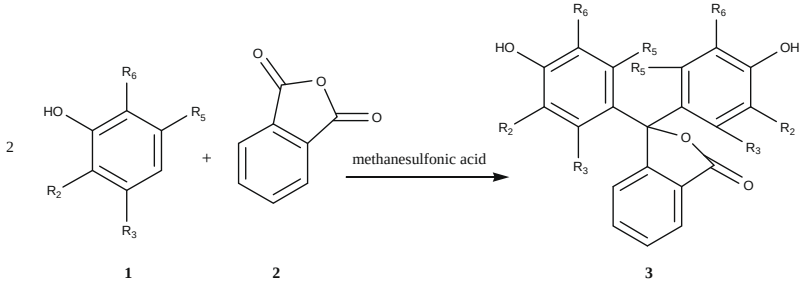


R = alkyl, cycloalkyl, heterocyclyl, aryl.

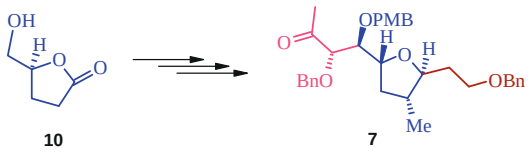


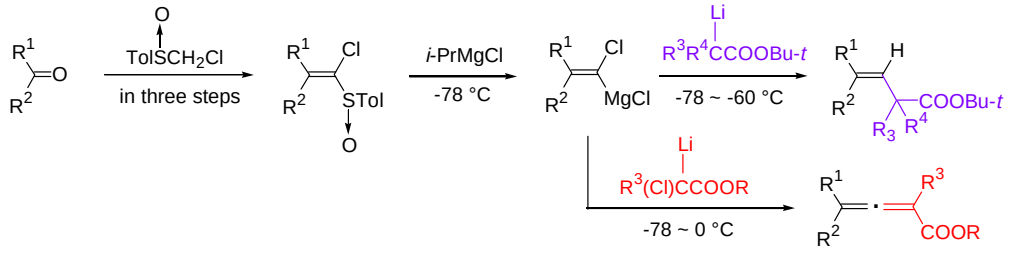


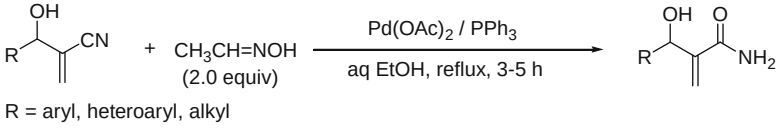




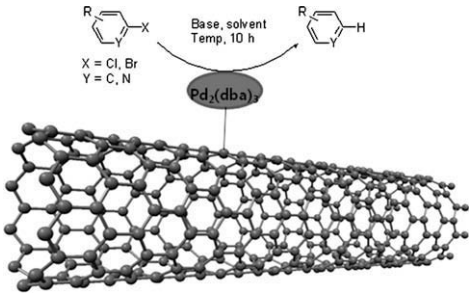
The use of methanesulfonic acid offers a novel and highly efficient method for the synthesis of phthalein indicator dyes in excellent yields on an industrial scale.

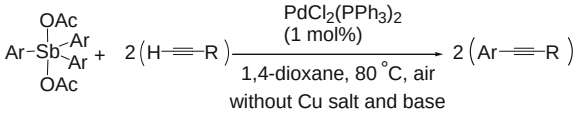


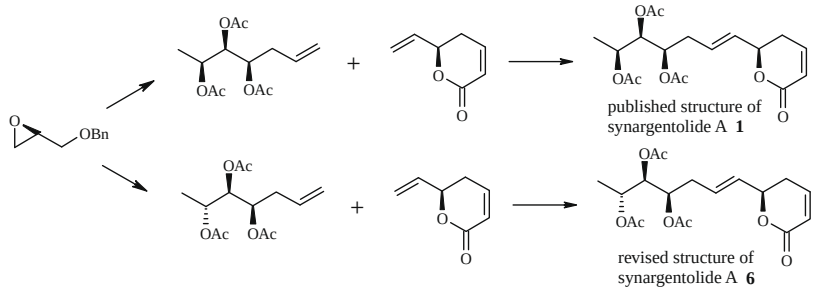


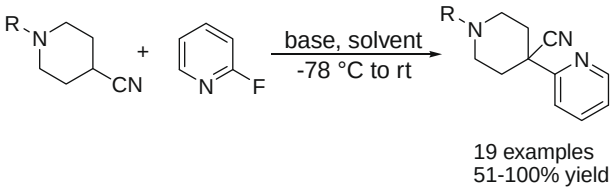


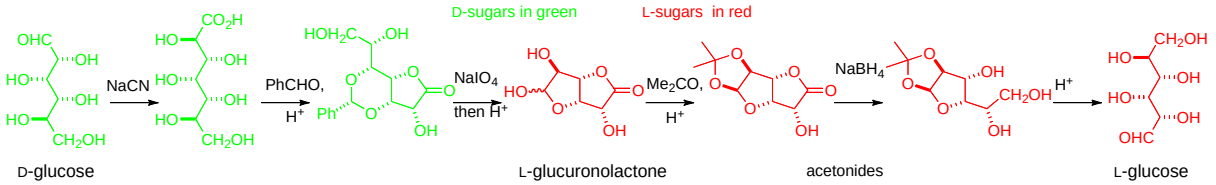
R = aryl, heteroaryl, alkyl

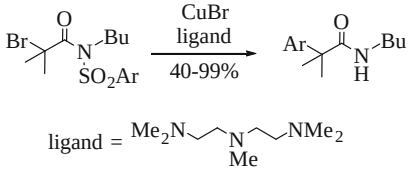




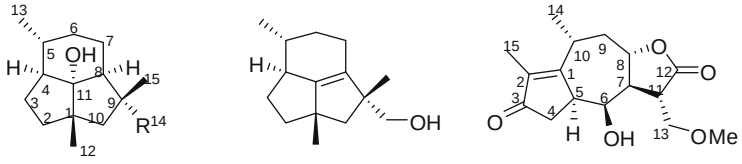






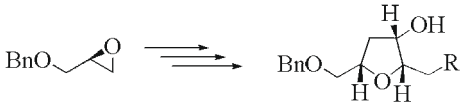


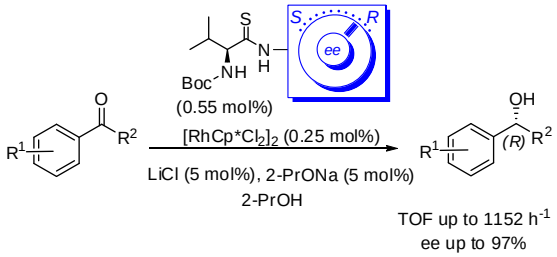
Reaction of *N*-alkyl-*N*-arylsulfonyl-2-halo-propionamides with pentamethyldiethylenetriamine and either CuBr or CuCl leads to 2-aryl propionamides in 40–99% yields.



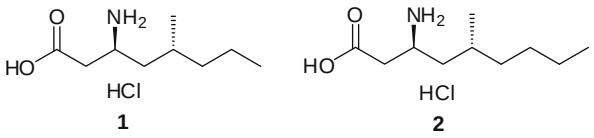
1 R=CH_2OH
3 R=COOH

2 **4**

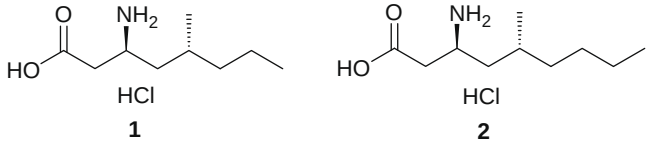




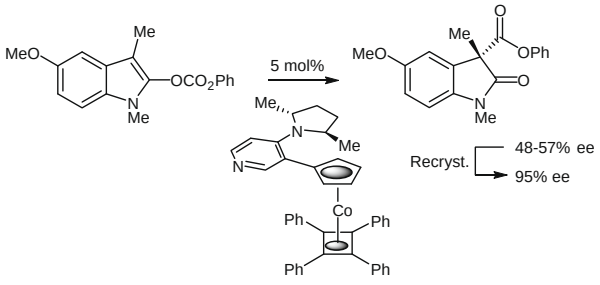
Fine-tuning of ligand structure results in higher catalytic activity and enantioselectivity in the rhodium-catalyzed asymmetric transfer hydrogenation of aryl alkyl ketones.

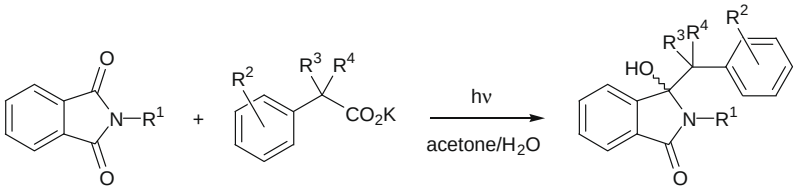


Scalable synthetic routes to β-amino acids **1** and **2** are reported. The two chiral centers are introduced through asymmetric Michael and *aza*-Michael reactions with excellent diastereoselectivity.

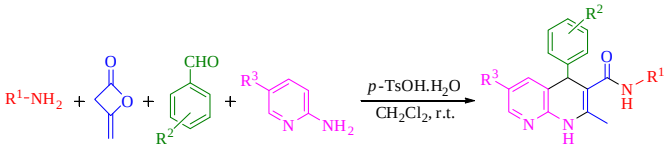


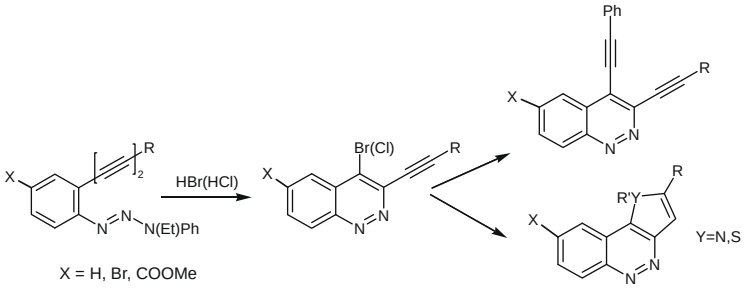
Scalable synthetic routes to β-amino acids **1** and **2** are reported via asymmetric hydrogenation of an enamide precursor to introduce the chirality at the β-carbon.

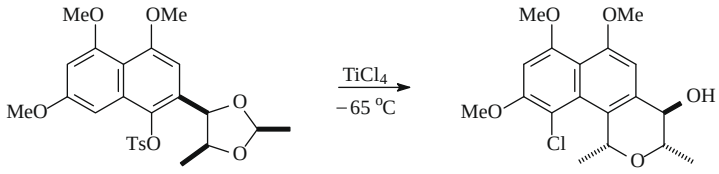




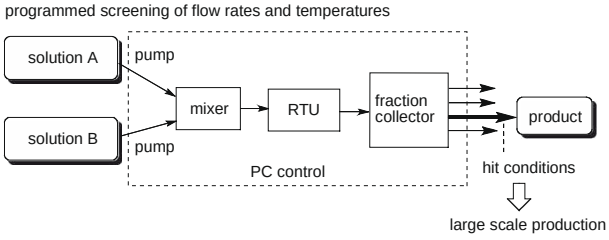
Photoadditions of phenylacetates to phthalimides give the corresponding benzylated hydroxyphthalimidines in moderate to high yields of 29–90%. With 2-phenylpropanoate, photoaddition affords a diastereoisomeric mixture in a de of 24% in favour of the *like*-diastereoisomer. L-3-Phenyllactate and 2-oxo-3-phenylpropanoate both furnish the benzylated product through subsequent loss of formaldehyde and decarbonylation, respectively.

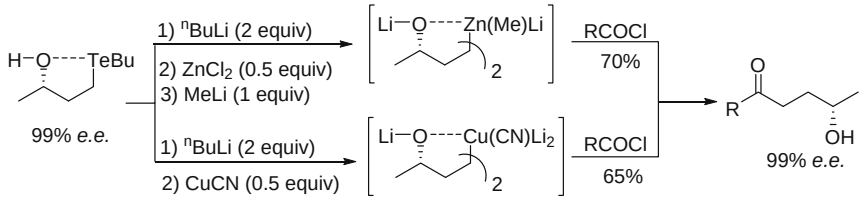


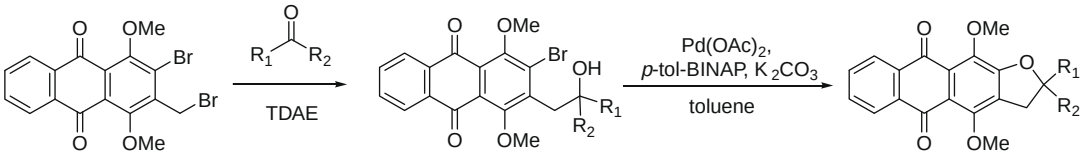


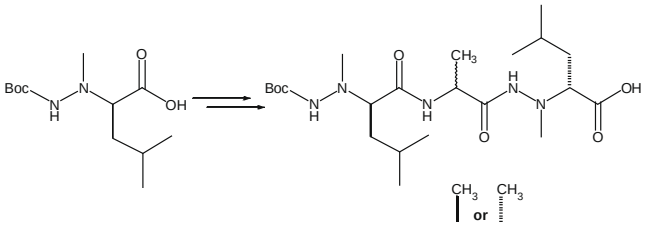


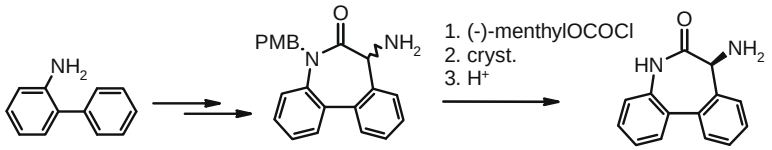
Low temperature rearrangement of a naphthyldioxolane with titanium(IV) chloride affords an angular naphthopyran in which a tosyloxy group is lost from one of the naphthalenic aromatic rings and chlorine is gained with complete regioselectivity by the other. The mechanism of this transformation is of interest.



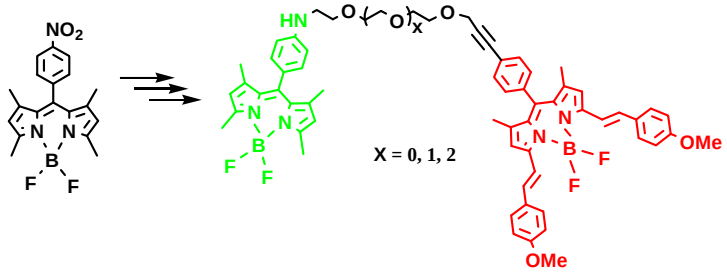




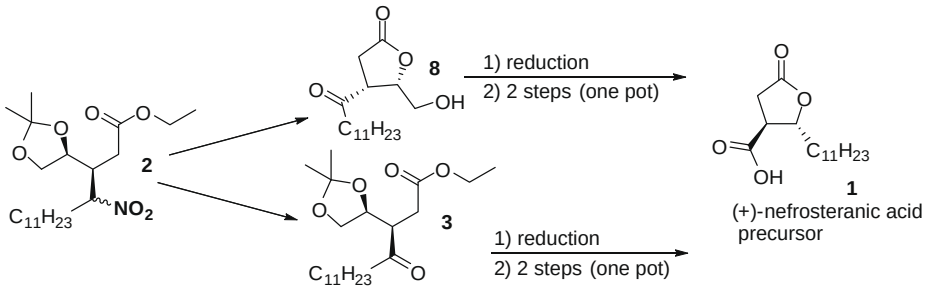


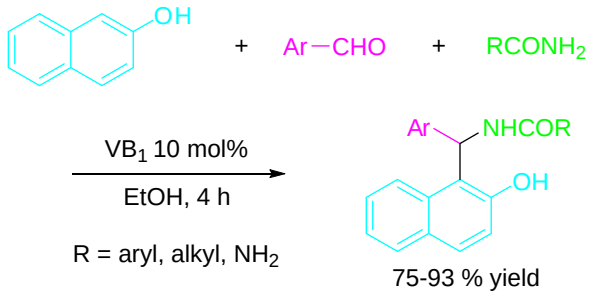


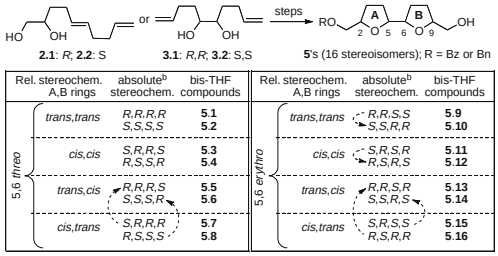
An improved synthesis of (*S*)-7-amino-5*H*,7*H*-dibenzo[*b*,*d*]azepin-6-one involving a selective crystallization for the resolution step is described.



Donor–acceptor dyes linked by flexible chains of different size have been engineered and their fluorescence properties were investigated.

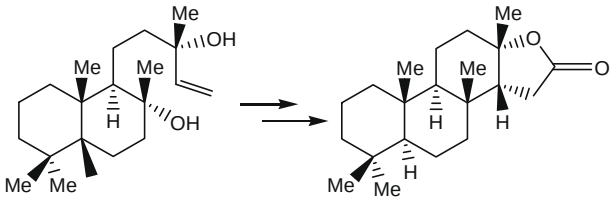




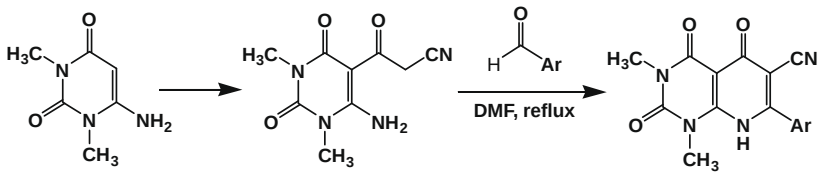


Rel. stereochem. A,B rings	absolute[b] stereochem.	bis-THF compounds
5,6 *threo*: *trans,trans*	*R,R,R,R* / *S,S,S,S*	**5.1** / **5.2**
5,6 *threo*: *cis,cis*	*S,R,R,S* / *R,S,S,R*	**5.3** / **5.4**
5,6 *threo*: *trans,cis*	*R,R,R,S* / *S,S,S,R*	**5.5** / **5.6**
5,6 *threo*: *cis,trans*	*S,R,R,R* / *R,S,S,S*	**5.7** / **5.8**
5,6 *erythro*: *trans,trans*	*R,R,S,S* / *S,S,R,R*	**5.9** / **5.10**
5,6 *erythro*: *cis,cis*	*S,R,S,R* / *R,S,R,S*	**5.11** / **5.12**
5,6 *erythro*: *trans,cis*	*R,R,S,R* / *S,S,R,S*	**5.13** / **5.14**
5,6 *erythro*: *cis,trans*	*S,R,S,S* / *R,S,R,R*	**5.15** / **5.16**

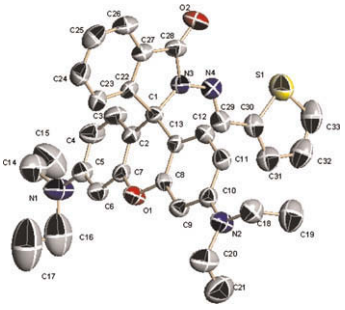
Stereoselective synthesis of 10 unique bifunctional stereoisomeric adjacent bis-THF intermediates (R = Bz), including **5.1**–**5.4**, **5.7**–**5.9**, **5.11**, and **5.15**–**5.16**, which can afford a library of all 64 asimicin-type acetogenins, is described.



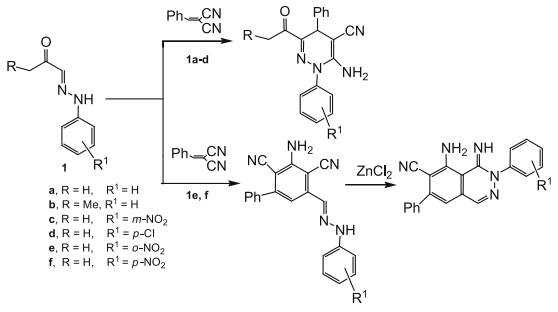
Facile asymmetric synthesis of tetracyclic homoterpene lactone has been achieved through chiral LBA-catalyzed biomimetic cyclization.

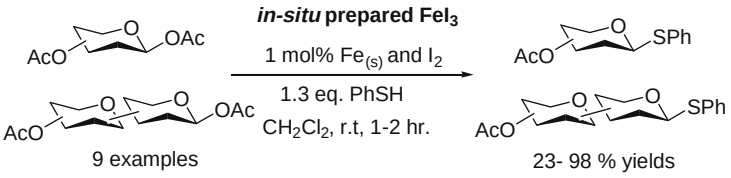


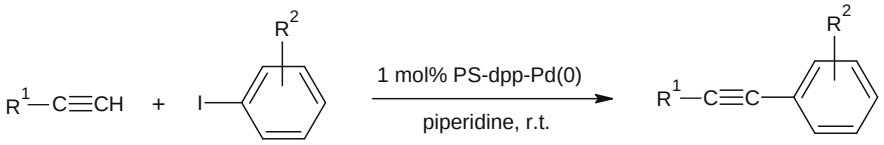
The reactions of N^4- and 5-cyanoacetyl derivates of 4-aminopyrimidines with aromatic aldehydes have yielded the *N*-(pyrimidin-4-yl)-3-arylacrylamides and the dihydropyrido[2,3-*d*]pyrimidines, respectively.



A new fluorescent sensor based on thiophene-activated rhodamine B reversibly binds Cr^{3+} to form a highly fluorescent pink ring-open form.







A polymer-supported palladium(0) diphenylphosphinoethane complex was found to be a highly active catalyst for the copper-free Sonogashira coupling reaction of aryl iodides with terminal alkynes, giving excellent yields of products (85–98%) under aerobic conditions.

*Corresponding author
Supplementary data available via ScienceDirect

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