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Tetrahedron

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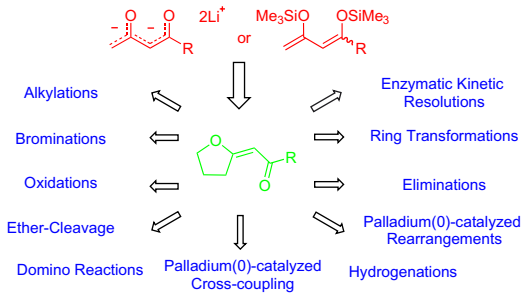

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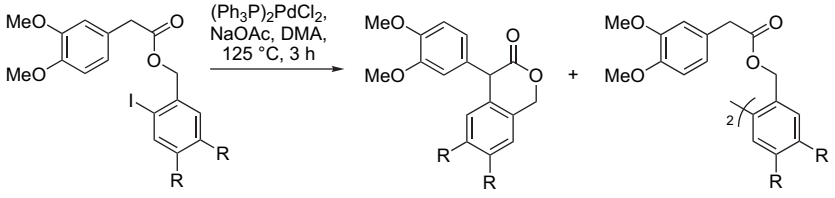
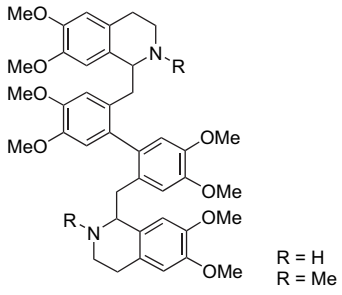
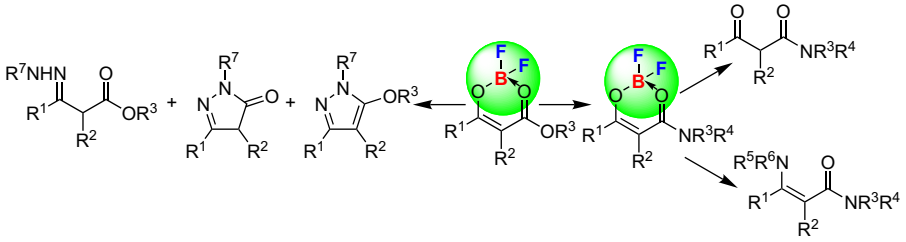
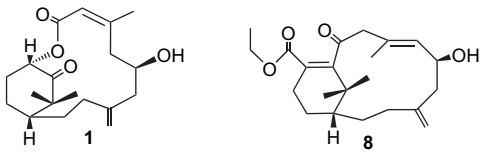


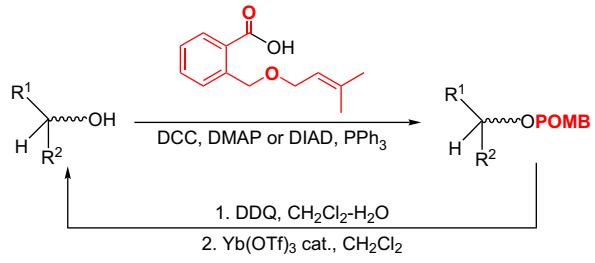




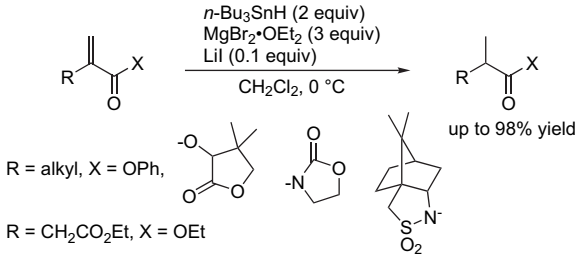
A wide variety of 2,2-difluoro-4-alkoxy-1,3,2-dioxaborinanes are converted to the β-keto amides and β-enamino carboxamides via 4-alkylamino-1,3,2-dioxaborinanes using alkylamines.

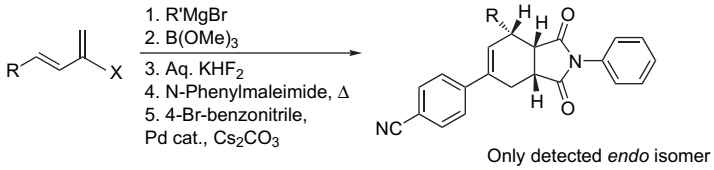


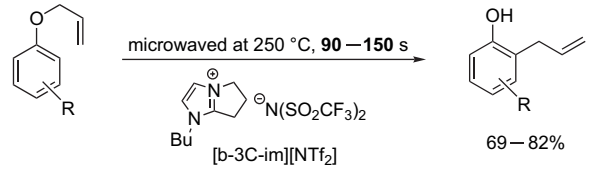
Chemical investigation of the soft coral *Cespitularia hypotentaculata* resulted in the isolation of eight new diterpenes, cespihypotins E–L (**1**–**8**). Compounds **7** and **8** exhibited immunomodulatory activities.

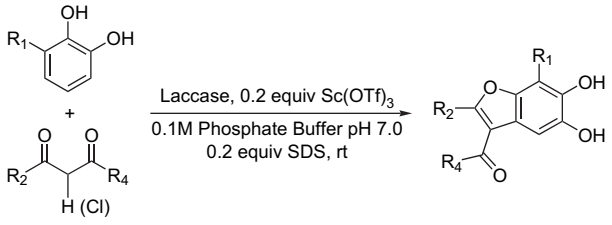


The conjugate reduction of α,β-unsaturated esters and amides, such as the depicted substrates, with tributyltin hydride proceeded in moderate to high yields in the presence of magnesium bromide diethyl etherate (and lithium iodide).

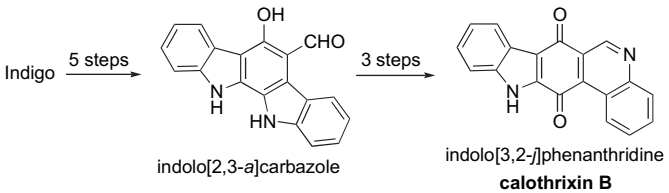


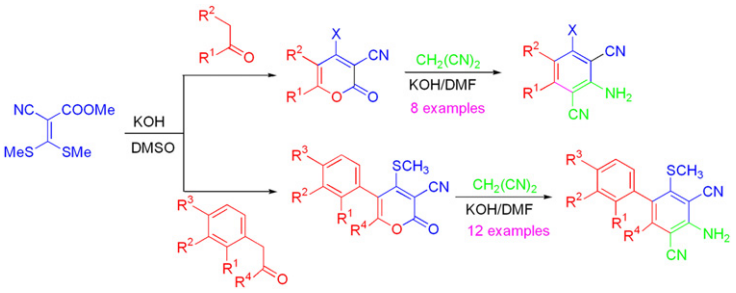


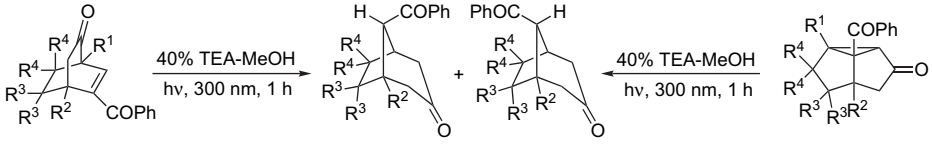


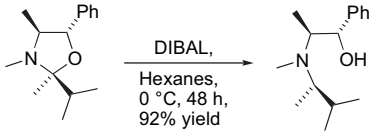


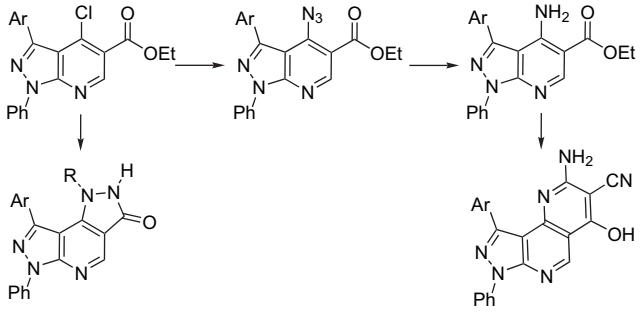
The synthesis of the alkaloids calothrixins A and B is described; the key step is the biomimetic conversion of the indolo[2,3-*a*]carbazole ring system into the indolo[3,2-*j*]phenanthridine ring of the natural products.

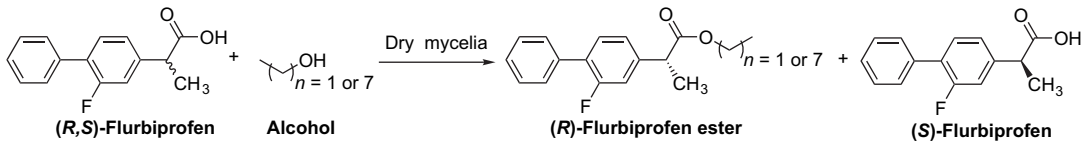




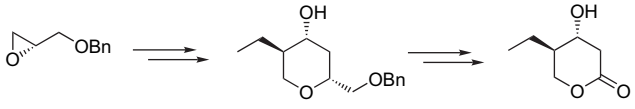


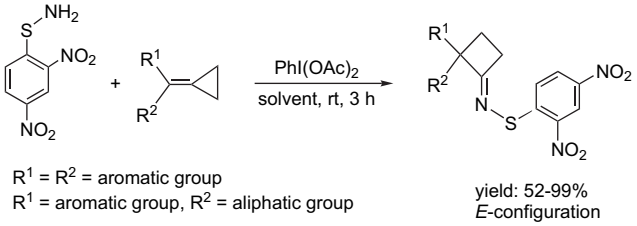




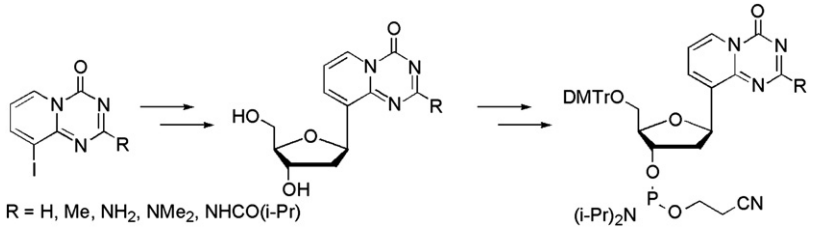


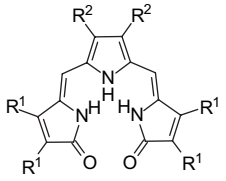
Mycelia of *Aspergillus oryzae* can be efficiently used in pure organic solvent for the resolution of flurbiprofen through esterification.





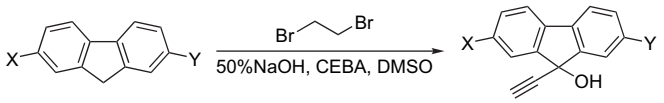
PhI(OAc)$_2$-mediated highly stereoselective addition of 2,4-dinitrophenylsulfenamide with methylenecyclopropanes (MCPs) to give the corresponding ring enlargement products in good yields.





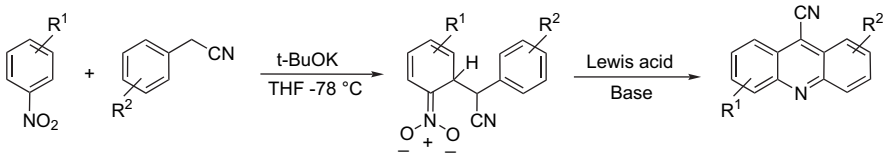
$R^1 = R^2 = CH_2CH_3$
$R^1 = CH_3$, $R^2 = CH_2CH_3$

Tripyrrindiones, a rare class of violet-colored tripyrrolic compounds, can be prepared from 3-pyrrolin-2-ones and pyrrole-2,5-dialdehydes and form intermolecularly hydrogen-bonded dimers in $CDCl_3$ and in the crystal.



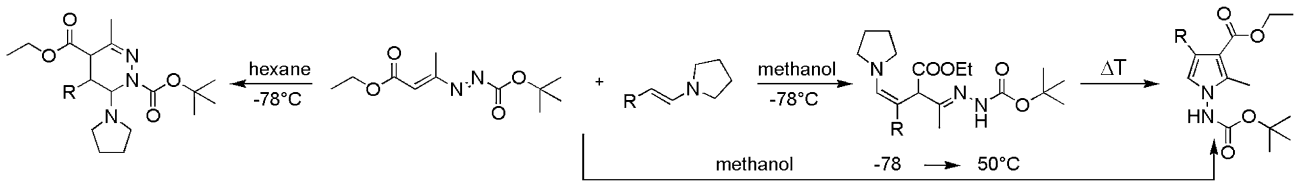
1a: X=Y=H
1b: X=H, Y=Br
1c: X=Y=Br
1d: X=H, Y=I
1e: X=Y=I
1f: X=H, Y=NO_2
1g: X=Br, Y=NO_2

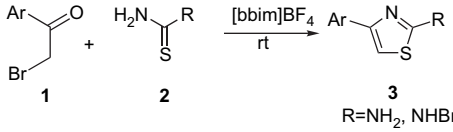
2a: X=Y=H, 79%
2b: X=H, Y=Br, 61%
2c: X=Y=Br, 67%
2d: X=H, Y=I, 56%
2e: X=Y=I, 82%
2f: X=H, Y=NO_2, 49%
2g: X=Br, Y=NO_2, 51%



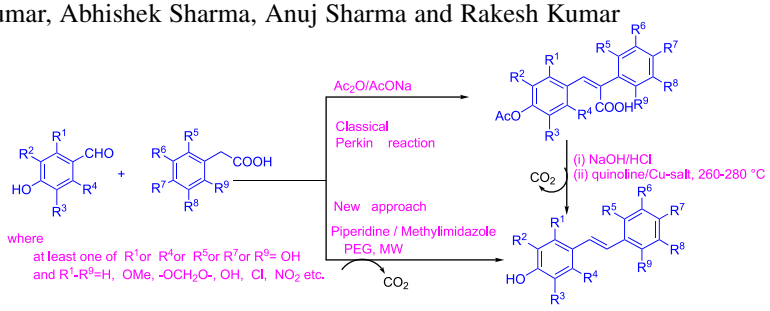
R^1 = H, 4-Cl, 4-Br, 4-F, 4-OMe, 4-SPh, 4-CF_3, 2,4-diCl, 3,4-diCl
R^2 = H, 3,4-diOMe, 4-Br

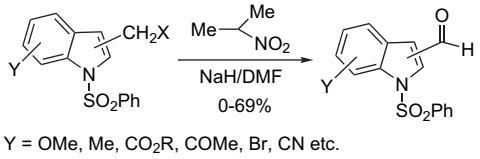
20 - 83% yield

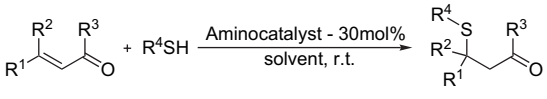


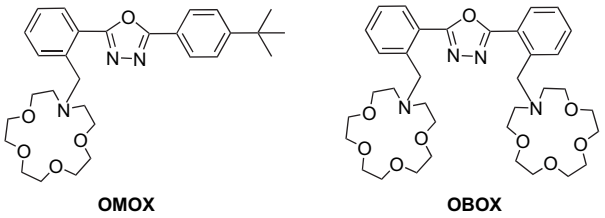


A highly efficient and rapid synthesis of 2-amino-4-arylthiazole and 2-methyl-4-arylthiazole from α-bromoketone and thiourea/thioamide is described using room temperature ionic liquid at ambient conditions. The method is simple, rapid and practical, generating thiazole derivatives in excellent isolated yields. This protocol is utilized for a commercially feasible synthesis of an anti-inflammatory agent, Fanetizole.

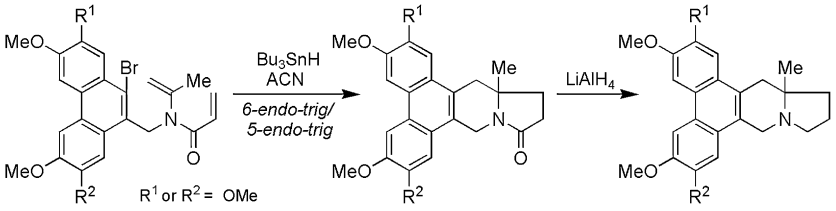


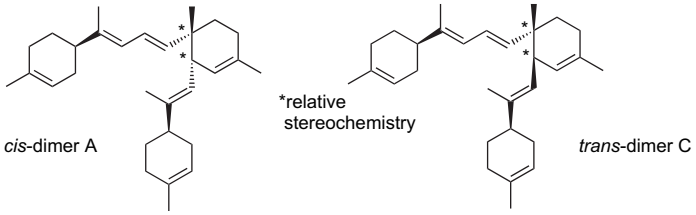


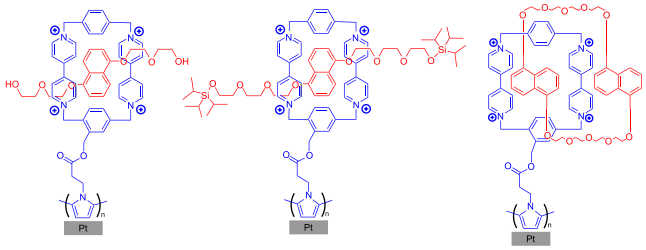


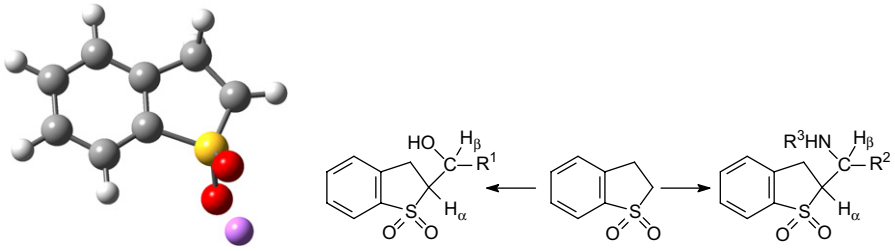


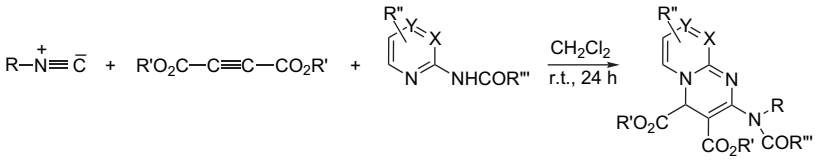
OBOX, which is better of the two hosts exhibited binding order $Zn^{2+} \gg Cd^{2+} > Mg^{2+} > Ba^{2+} > Ca^{2+} > Li^{+} > K^{+} > Na^{+}$.

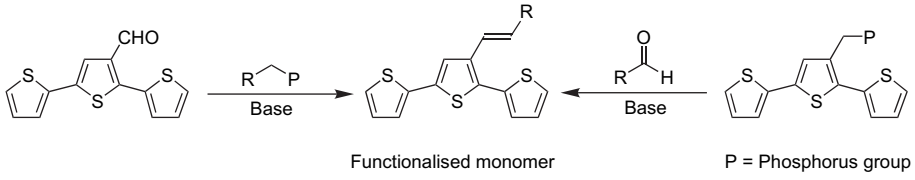


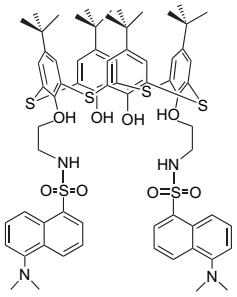




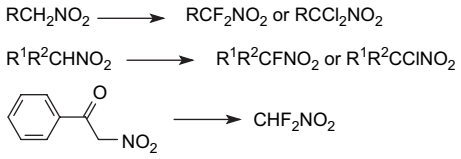


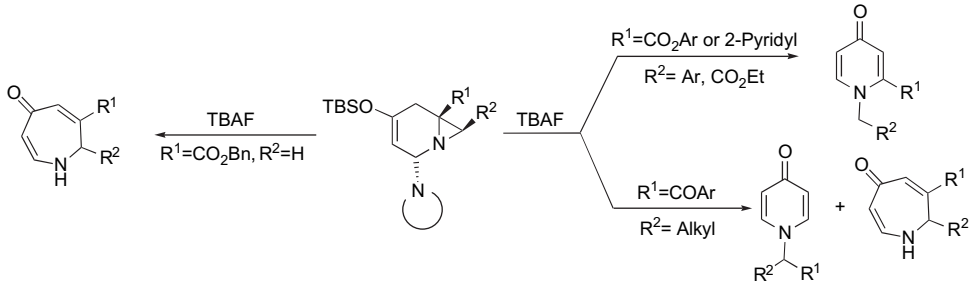


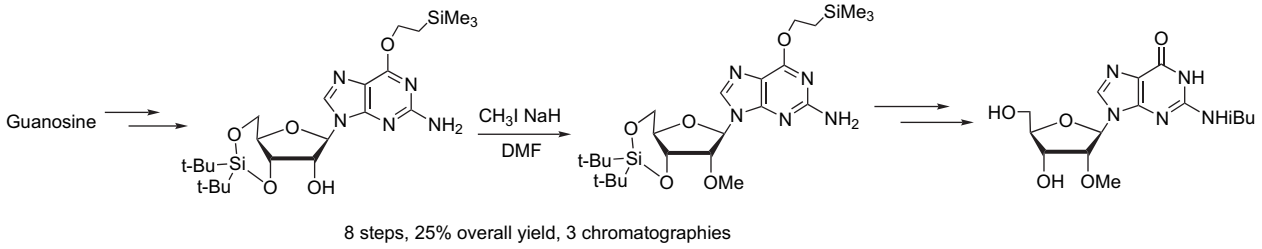


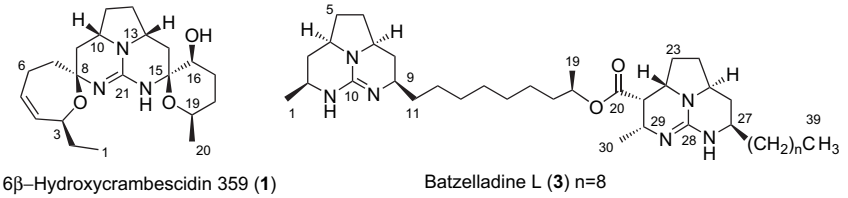


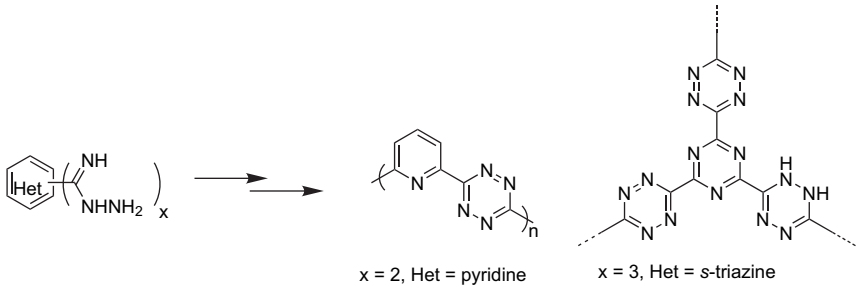
A new thiacalix[4]arene based fluorescent sensor bearing two dansyl groups has been synthesized which selectivity complexes Cu^{2+} and F^- ions over other metal ions and anions tested.

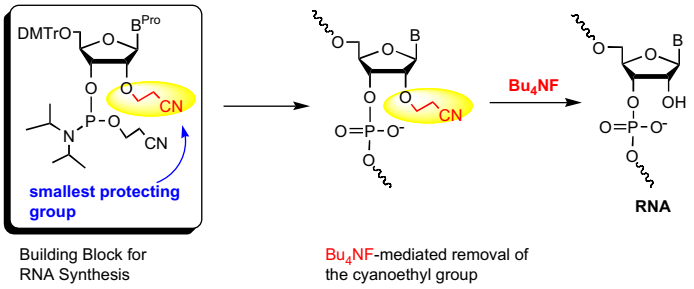


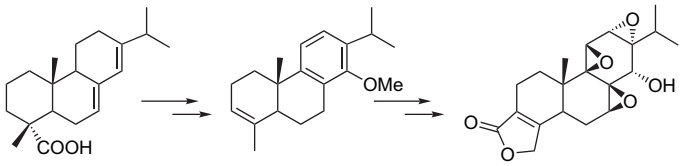


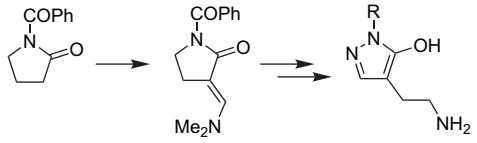












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