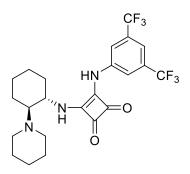
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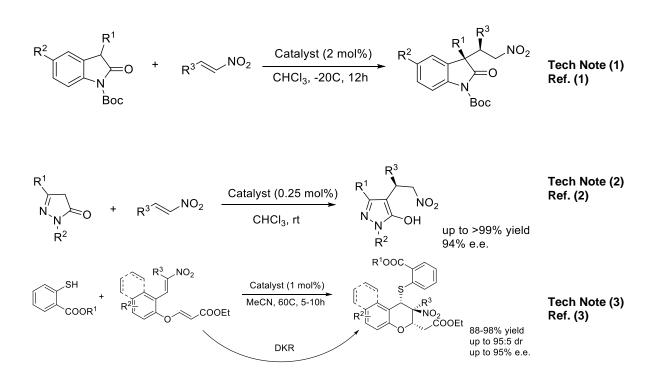
Catalog # 07-1423

```
3-[[3,5-Bis(trifluoromethyl)phenyl]amino]-4-[[(1S,2S)-2-(1-piperidinyl)cyclohexyl]amino]-3-cyclobutene-1,2-dione, 95%, (99% ee)
```



Technical Notes:

- 1. An efficient diastereo- and enantioselective Michael addition of 3-substituted oxindoles onto nitroalkenes catalyzed by a bifunctional chiral squaramide catalyst has been developed.
- 2. An efficient chiral squaramide-catalysed enantioselective Michael addition of pyrazolin-5-ones to nitroalkenes has been developed.
- 3. An efficient asymmetric cascade sulfa-Michael/Michael addition reaction catalyzed by a chiral bifunctional squaramide-tertiary amine catalyst has been developed.
- 4. A highly enantio- and diastereoselective sulfa-Michael addition of thioacetic acid to α,β-disubstituted nitroalkenes catalysed by a chiral squaramide organocatalyst has been described.



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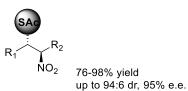
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Catalyst (0.2 mol%)

 $CH_2CI_2, 0C$



Tech Note (4) Ref. (4)

R₁ = aryl, hereroaryl, alkyl R₂ = Me, Et, Ph

References:

- 1. Tetrahedron: Asymmetry, **2012**, 23, 972-980.
- 2. Org. Biomol. Chem., 2013, 11, 6215-6223.
- 3. Org. Lett., 2013, 15, 1190-1193.
- 4. Org. Biomol. Chem., 2012, 10, 6876-6884.