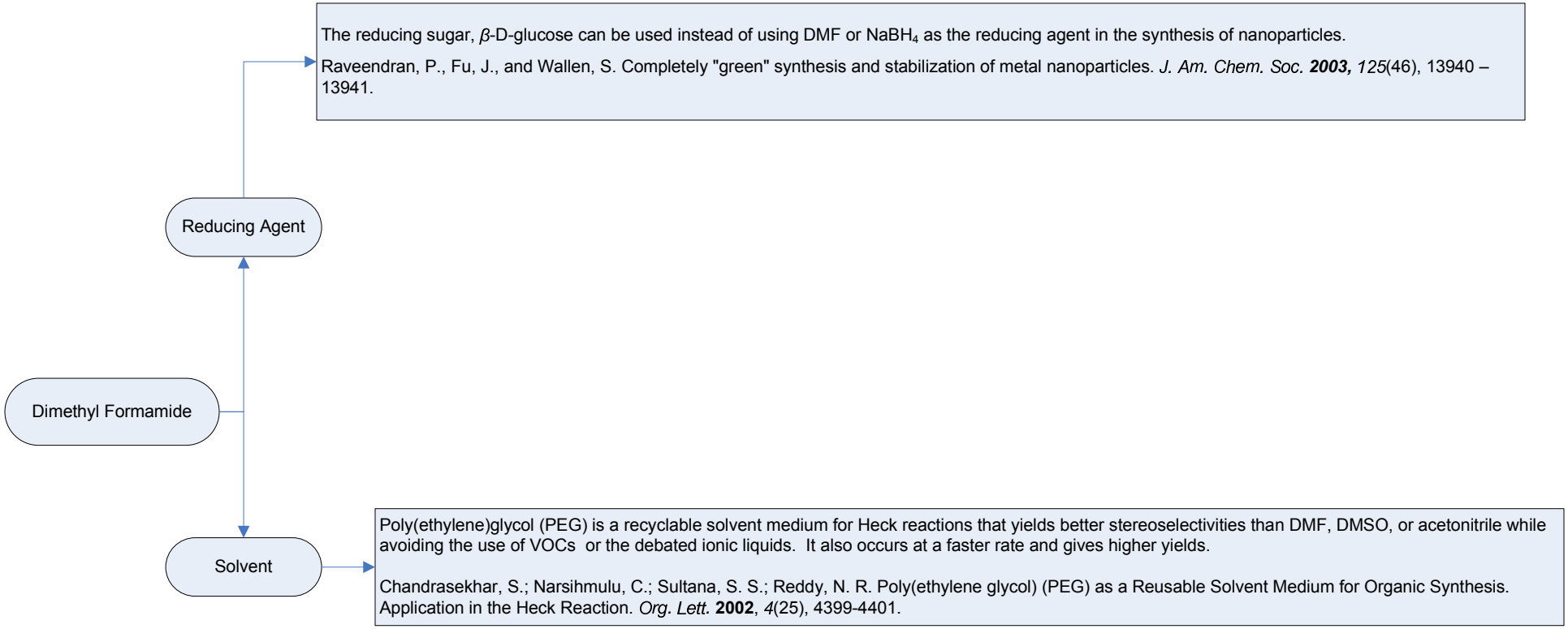
The reducing sugar, β-D-glucose can be used instead of using DMF or $NaBH_4$ as the reducing agent in the synthesis of nanoparticles.
Raveendran, P., Fu, J., and Wallen, S. Completely "green" synthesis and stabilization of metal nanoparticles. J. Am. Chem. Soc. 2003, 125(46), 13940 – 13941.
Reducing Agent
Dimethyl Formamide
Solvent
Poly(ethylene)glycol (PEG) is a recyclable solvent medium for Heck reactions that yields better stereoselectivities than DMF, DMSO, or acetonitrile while avoiding the use of VOCs or the debated ionic liquids. It also occurs at a faster rate and gives higher yields.
Chandrasekhar, S.; Narsihmulu, C.; Sultana, S. S.; Reddy, N. R. Poly(ethylene glycol) (PEG) as a Reusable Solvent Medium for Organic Synthesis. Application in the Heck Reaction. Org. Lett. 2002, 4(25), 4399-4401.