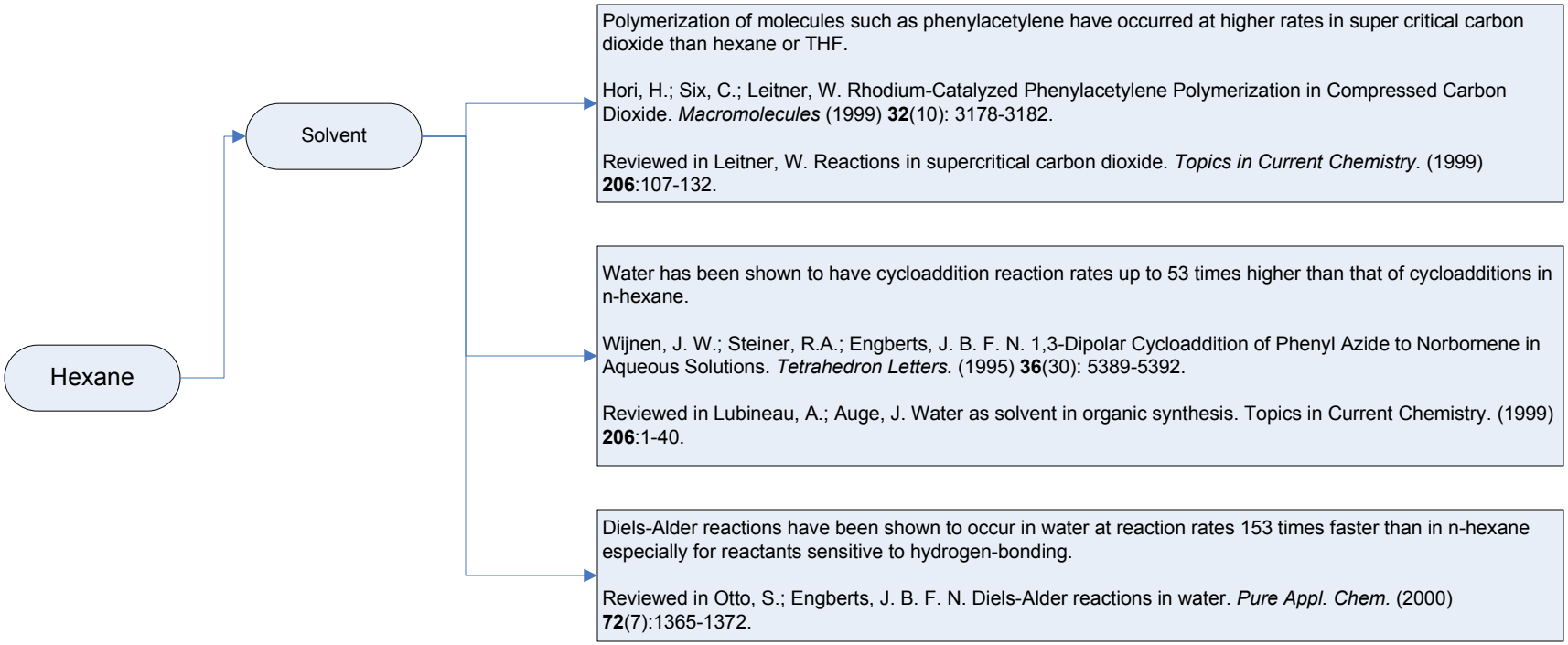
Hexane
Solvent
Polymerization of molecules such as phenylacetylene have occurred at higher rates in super critical carbon dioxide than hexane or THF.
Hori, H.; Six, C.; Leitner, W. Rhodium-Catalyzed Phenylacetylene Polymerization in Compressed Carbon Dioxide. *Macromolecules* (1999) **32**(10): 3178-3182.
Reviewed in Leitner, W. Reactions in supercritical carbon dioxide. *Topics in Current Chemistry.* (1999) **206**:107-132.
Water has been shown to have cycloaddition reaction rates up to 53 times higher than that of cycloadditions in n-hexane.
Wijnen, J. W.; Steiner, R.A.; Engberts, J. B. F. N. 1,3-Dipolar Cycloaddition of Phenyl Azide to Norbornene in Aqueous Solutions. *Tetrahedron Letters.* (1995) **36**(30): 5389-5392.
Reviewed in Lubineau, A.; Auge, J. Water as solvent in organic synthesis. Topics in Current Chemistry. (1999) **206**:1-40.
Diels-Alder reactions have been shown to occur in water at reaction rates 153 times faster than in n-hexane especially for reactants sensitive to hydrogen-bonding.
Reviewed in Otto, S.; Engberts, J. B. F. N. Diels-Alder reactions in water. *Pure Appl. Chem.* (2000) **72**(7):1365-1372.