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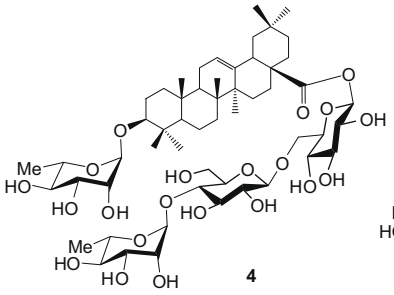

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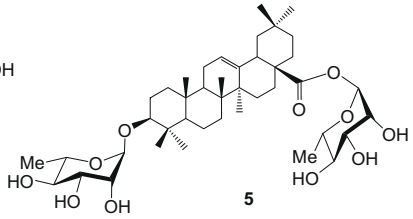

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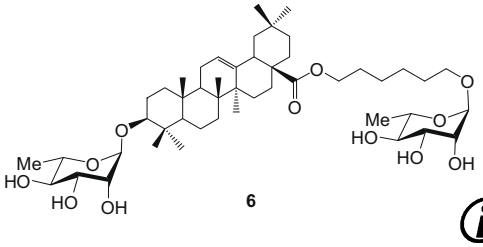

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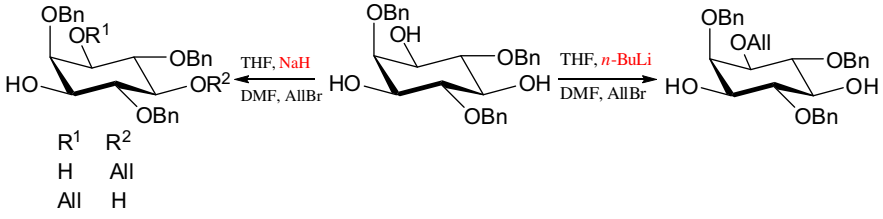
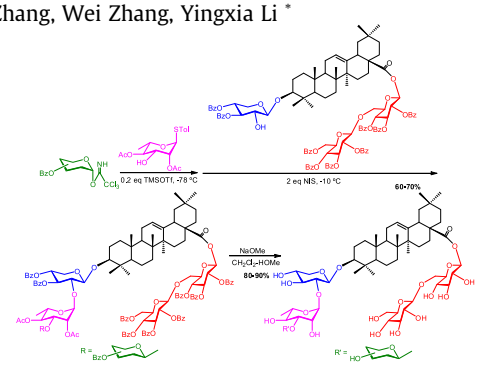
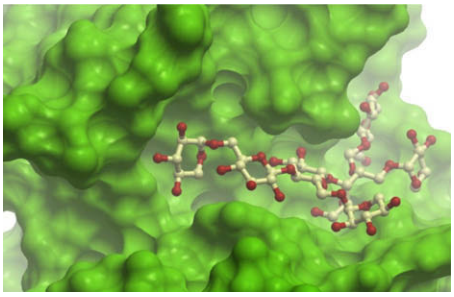
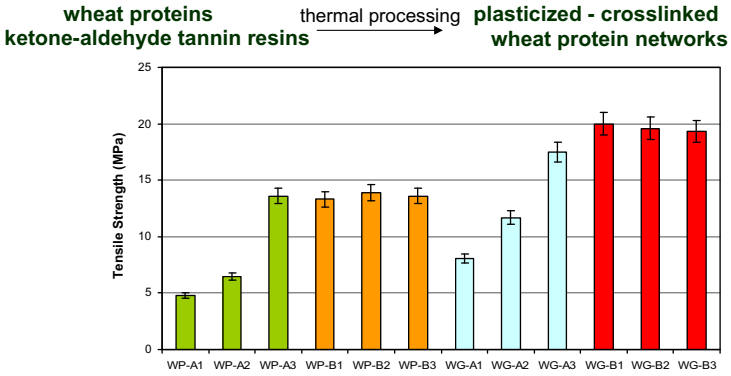
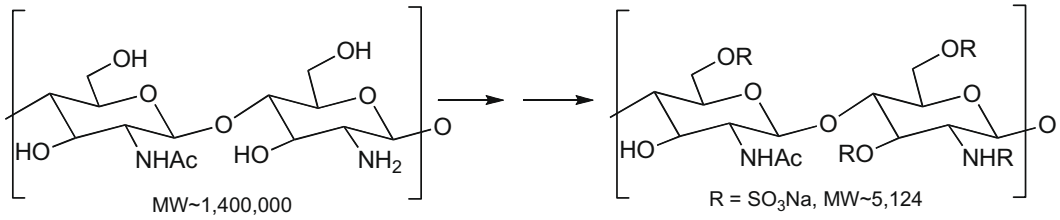


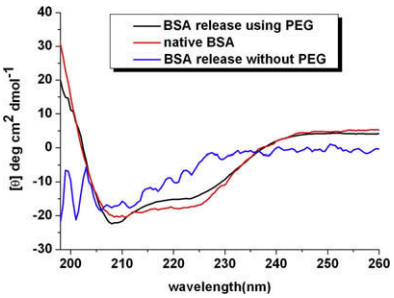
Experimental investigations of the O-alkylations of eight *myo*-inositol derivatives using BuLi/alkyl halide and NaH/alkyl halide show that BuLi/alkyl halide gives better regioselectivity than NaH/alkyl halide.

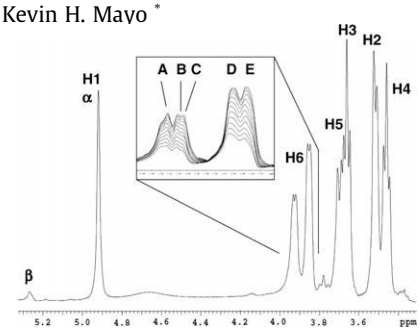


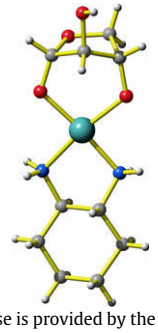




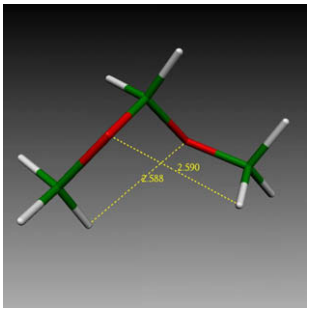


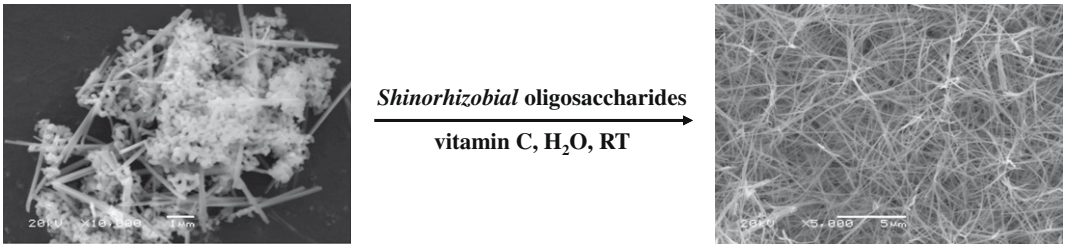


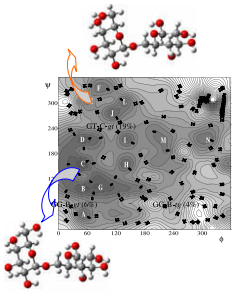




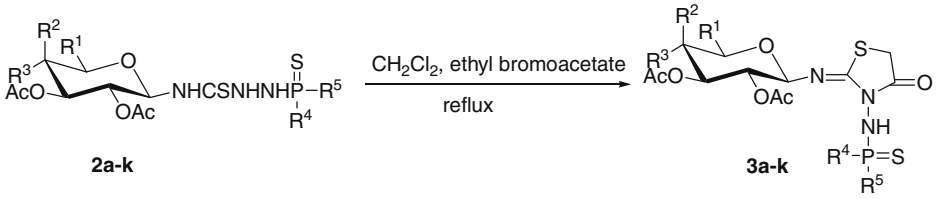
A prominent metal-binding site in the aqueous solution equilibrium of an aldose is provided by the furanose isomer in its 1,3-bonding mode. Since this binding mode does not lead to typical signal patterns in NMR spectra, structural work on single crystals was necessary to confirm this form of aldose chelating. The figure shows L-threose adopting this mode, but pentoses and hexoses also ligate that way to palladium(II) centres. 1,3-Bonding galactofuranose thus is the major isomer in an equimolar aqueous solution of the palladium reagent [Pd^{II}\{(*R*,*R*)-chxn\}(OH)2] (chxn = 1,2-diaminocyclohexane) and D-galactose.

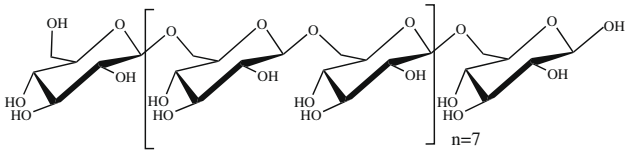






Notes





→4)-α-D-Rha*p*-(1→3)-α-D-Rha*p*-(1→3)-β-D-Man*p*-(1→
→3)-β-D-Gal*p*-(1→3)-α-D-Man*p*-(1→2)-α-D-Man*p*-(1→
β-D-Glc*p*-(1→3)-α-D-Gal*p*-(1→4)-α-D-Glc*p*A(1→2)

*Corresponding author
Supplementary data available via ScienceDirect

COVER

High-mannose-type asparagine-linked glycans play critical roles in glycoprotein processing and quality control in the endoplasmic reticulum. However, the analysis of these events has been hindered by the limited availability of glycan substrates. Work by Ito and co-worker's has enabled the systematic synthesis of high mannose-type glycans, which were converted to conjugates with various small molecules and proteins. These probes revealed the substrate specificities of lectins, chaperones, and glycoprotein-processing enzymes.

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