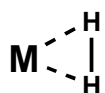


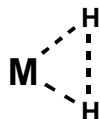
**W0357**

**Structure and Dynamics of Transition Metal Hydrides.** Michael Heinekey<sup>1</sup>, Tom Koetzle<sup>2</sup>, <sup>1</sup>Dept. of Chemistry, Univ. of Washington, Box 351700, Seattle, WA 98195-1700, <sup>2</sup>IPNS, Div., Argonne National Laboratory, Argonne, IL 60439-4814.

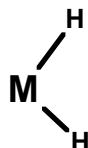
The structure of metal hydride and dihydrogen complexes is ideally suited for study by neutron diffraction. Complexes with two or more hydride ligands often present structural ambiguities, which can be addressed by NMR and computational methods in addition to diffraction methods. Several examples will be discussed, which span a range of structural types.



**dihydrogen**



**elongated  
dihydrogen**



**dihydride**