Alkaline-earth (Be, Mg, Ca) bonds at the origin of huge acidity enhancements.

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SUPPORTING INFORMATION
(2 pages)
Figure S1. G4 Dissociation energies ($D_0$, kJ/mol) of the complexes formed by association of $\text{MH}_2$, $\text{MF}_2$ and $\text{MCl}_2$ ($M = \text{Be, Mg, Ca}$) with different Lewis bases.

Figure S2. Equilibrium structures of the complexes formed upon the interaction of $\text{MH}_2$ ($M = \text{Be, Mg, Ca}$) with $\text{FH}$ (first row); $\text{MH}_2$ ($M = \text{Mg, Ca}$) with $\text{HCl}$ and $\text{CaH}_2$ with $\text{SH}_2$ (second row). In all cases, the spontaneous formation of a $\text{H}_2$ molecule is observed. Bond distances are in Å.