Brønsted-Lowry Acids and Bases

acid proton donor

base proton acceptor

$$HF + H_2O \iff F^- + H_3O^+ \quad K_a = 7.2 \times 10^{-4}$$

$$acid_1 \quad base_2 \quad base_1 \quad acid_2$$

$$CH_3NH_2 + H_2O \iff CH_3NH_3^+ + OH_2^-$$

$$base_1 \quad acid_2 \quad acid_1 \quad base_2$$

H₃O⁺ strongest acid in water OH⁻ strongest base in water

H₂O amphoteric acid or base