

Oxidation-Reduction Reactivity Series

	conjugate oxidizing agent	conjugate reducing agent	
strong oxidizing agents	$\text{MnO}_4^-(aq)$	$\text{MnO}_2(s)$	neutral reducing agents
	$\text{MnO}_4^-(aq)$	$\text{Mn}^{2+}(aq)$	
	$\text{Cl}_2(aq)$	$\text{Cl}^-(aq)$	
	$\text{Cr}_2\text{O}_7^{2-}(aq)$	$\text{Cr}^{3+}(aq)$	
	$\text{O}_2(g)$	$\text{H}_2\text{O}(l)$	
	$\text{Br}_2(aq)$	$\text{Br}^-(aq)$	
	$\text{HNO}_3(aq)$	$\text{NO}(g)$	
stronger weak oxidizing agents	$\text{H}_2\text{O}_2(aq)$	$\text{OH}^-(aq)$	weaker
	$\text{Ag}^+(aq)$	$\text{Ag}(s)$	↑
	$\text{O}_2(aq)$	$\text{H}_2\text{O}_2(aq)$	weak reducing agents
↓ weaker	$\text{MnO}_4^-(aq)$	$\text{MnO}_2(s)$	
	$\text{O}_2(aq)$	$\text{OH}^-(aq)$	stronger
	$\text{Cu}^{2+}(aq)$	$\text{Cu}(s)$	
	$\text{SO}_4^{2-}(aq)$	$\text{HSO}_3^-(aq)$	
	$\text{H}^+(aq)$	$\text{H}_2(g)$	
neutral oxidizing agents	$\text{Co}^{2+}(aq)$	$\text{Co}(s)$	strong reducing agents
	$\text{Zn}^{2+}(aq)$	$\text{Zn}(s)$	
	$\text{K}^+(aq)$	$\text{K}(s)$	

reactions shown in **bold** occur in basic solution only