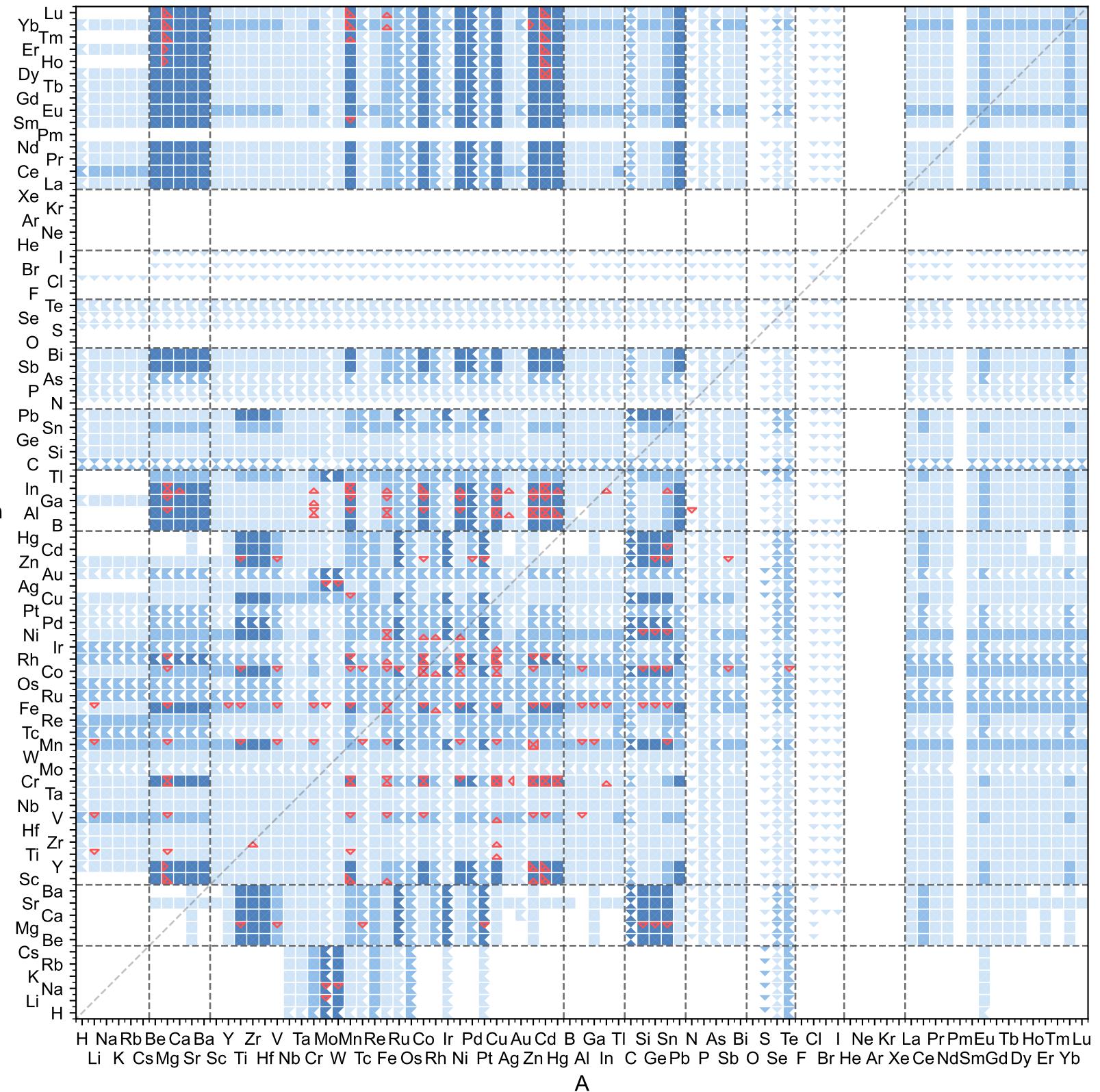


# Chemically Valid $\text{AB}_2\text{X}_4$ Chemical Space



Oxide  
 Sulfide  
 Selenide  
 Telluride

Number of compositions

Low Oxidation State Threshold

Oxide: 5057

Sulfide: 4385

Selenide: 4115

Telluride: 2618

Medium Oxidation State Threshold

Oxide: 1679

Sulfide: 1668

Selenide: 1529

Telluride: 869

High Oxidation State Threshold

Oxide: 508

Sulfide: 508

Selenide: 494

Telluride: 397

Experimentally Known

Oxide: 124

Sulfide: 72

Selenide: 34

Telluride: 4