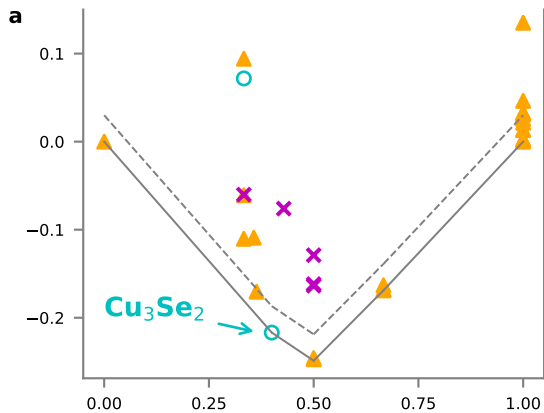


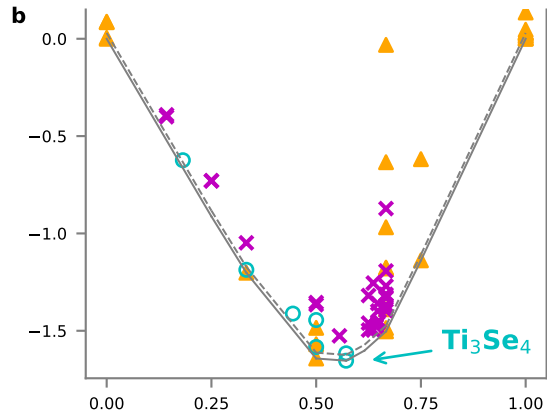
formation energy [eV/Atom]

CuS

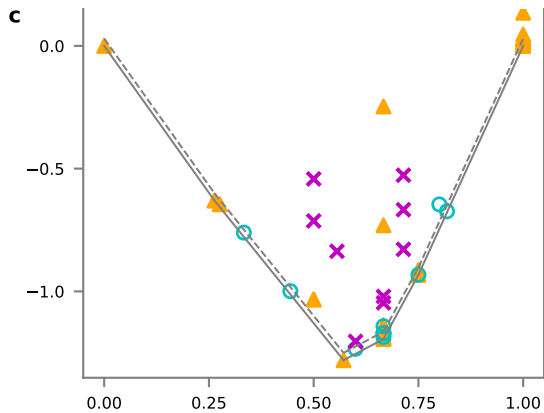
▲ CuS ○ CuSe × CuO

**TiS**

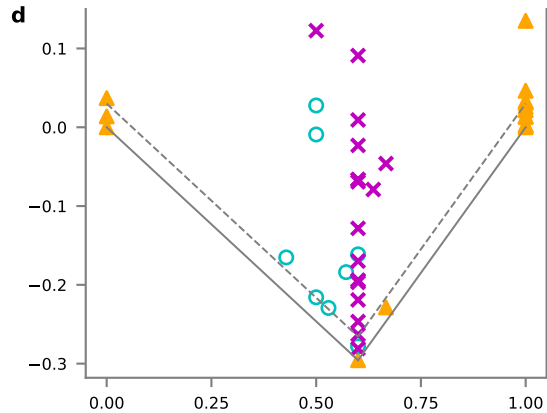
▲ TiS ○ TiSe × TiO

**NbS**

▲ NbS ○ NbSe × NbO

**BiS**

▲ BiS ○ BiSe × BiO

 $y/(x+y)$