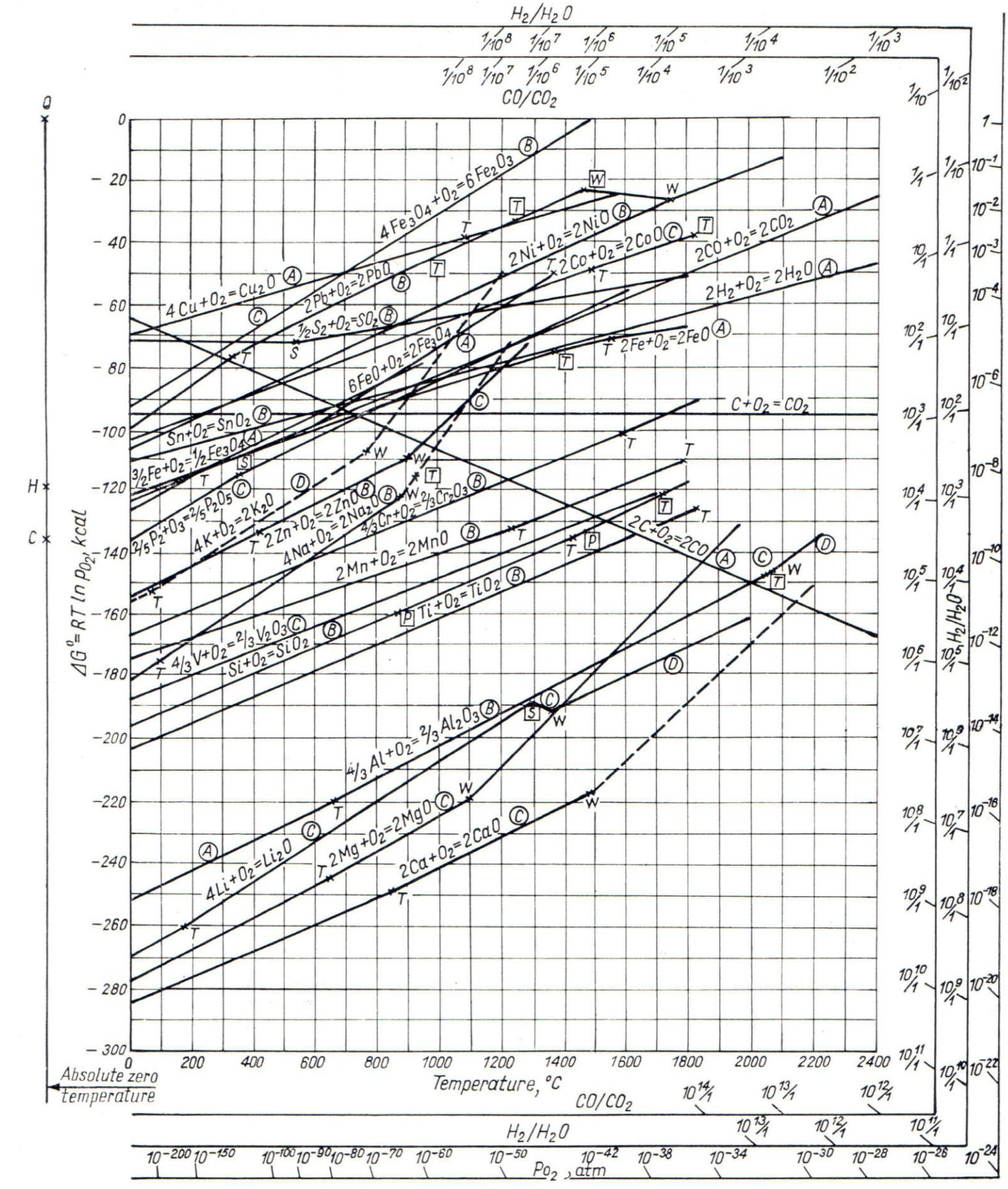
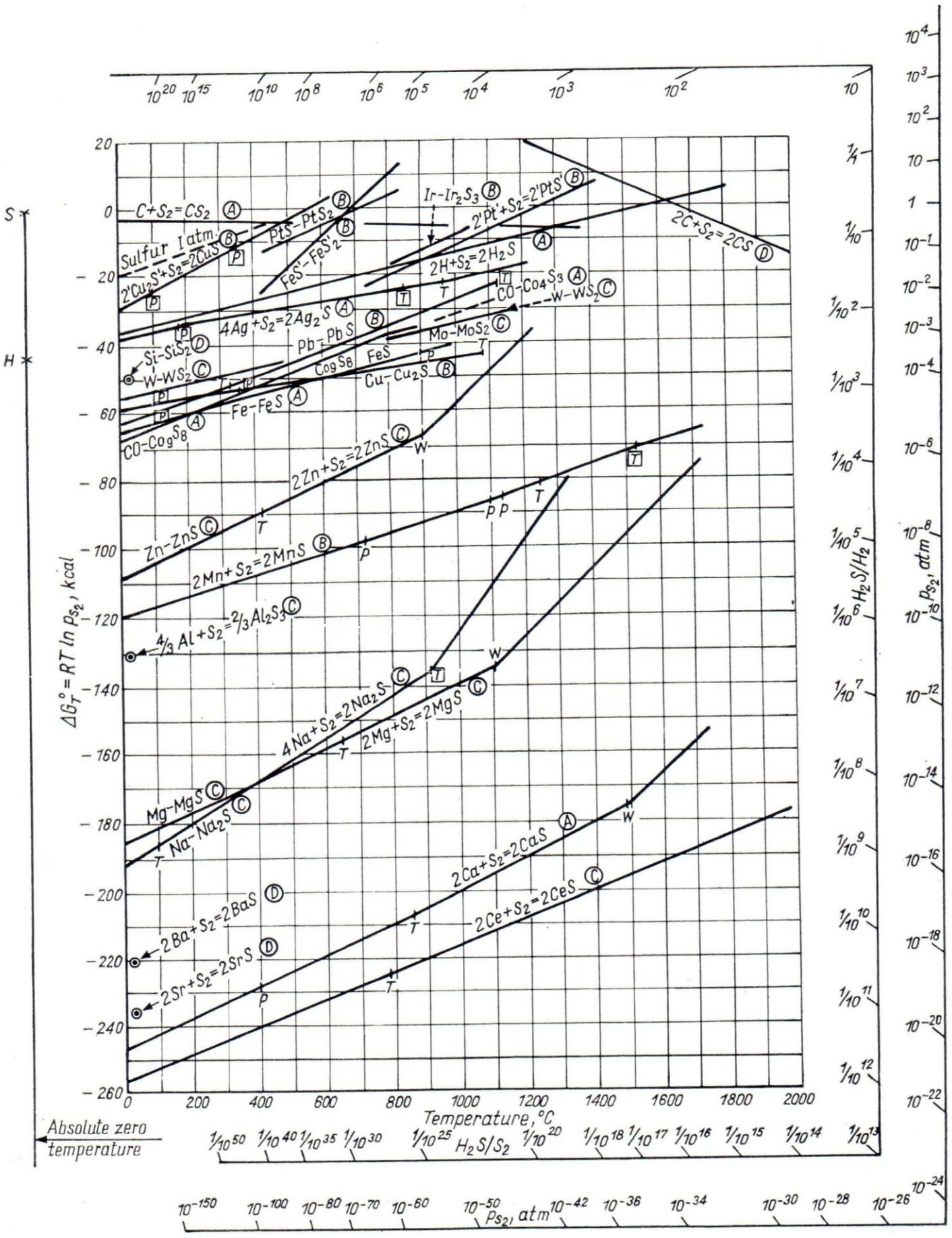

H_2/H_2O
CO/CO_2
$\Delta G^0 = RT \ln p_{O_2}$, kcal
Temperature, °C
Oxygen pressure, p_{O_2}, atm
H_2/H_2O
CO/CO_2
P_{O_2}, atm
Absolute zero temperature
Q
H
C
$4Fe_3O_4 + O_2 = 6Fe_2O_3$
$4Cu + O_2 = Cu_2O$
$2Pb + O_2 = 2PbO$
$\frac{1}{2}S_2 + O_2 = SO_2$
$6FeO + O_2 = 2Fe_3O_4$
$2Ni + O_2 = 2NiO$
$2Co + O_2 = 2CoO$
$2CO + O_2 = 2CO_2$
$2H_2 + O_2 = 2H_2O$
$2Fe + O_2 = 2FeO$
$C + O_2 = CO_2$
$Sn + O_2 = SnO_2$
$\frac{3}{2}Fe + O_2 = \frac{1}{2}Fe_3O_4$
$\frac{2}{5}P_2 + O_3 = \frac{2}{5}P_2O_5$
$4K + O_2 = 2K_2O$
$2Zn + O_2 = 2ZnO$
$4Na + O_2 = 2Na_2O$
$\frac{4}{3}Cr + O_2 = \frac{2}{3}Cr_2O_3$
$2Mn + O_2 = 2MnO$
$2C + O_2 = 2CO$
$Ti + O_2 = TiO_2$
$\frac{4}{3}V + O_2 = \frac{2}{3}V_2O_3$
$Si + O_2 = SiO_2$
$\frac{4}{3}Al + O_2 = \frac{2}{3}Al_2O_3$
$4Li + O_2 = Li_2O$
$2Mg + O_2 = 2MgO$
$2Ca + O_2 = 2CaO$



$\Delta G_T^\circ = RT \ln p_{S_2}$, kcal
Temperature, °C
H_2S/S_2
H_2S/H_2
p_{S_2}, atm
Absolute zero temperature
S
H
$C+S_2=CS_2$ (A)
Sulfur 1 atm.
$2'Cu_2S'+S_2=2CuS$ (B)
$PtS-PtS_2$ (B)
$FeS'-FeS'_2$ (B)
$Ir-Ir_2S_3$ (B)
$2'Pt'+S_2=2'PtS'$ (B)
$2C+S_2=2CS$ (D)
$2H+S_2=2H_2S$ (A)
$CO-Co_4S_3$ (A)
$W-WS_2$ (C)
$4Ag+S_2=2Ag_2S$ (A)
$Pb-PbS$ (B)
$Mo-MoS_2$ (C)
$Si-SiS_2$ (D)
$W-WS_2$ (C)
Co_9S_8 FeS
$Cu-Cu_2S$ (B)
$Fe-FeS$ (A)
$CO-Co_9S_8$ (A)
$2Zn+S_2=2ZnS$ (C)
$Zn-ZnS$ (C)
$2Mn+S_2=2MnS$ (B)
$4/3\,Al+S_2=2/3\,Al_2S_3$ (C)
$4Na+S_2=2Na_2S$ (C)
$2Mg+S_2=2MgS$ (C)
$Mg-MgS$ (C)
$Na-Na_2S$ (C)
$2Ca+S_2=2CaS$ (A)
$2Ce+S_2=2CeS$ (C)
$2Ba+S_2=2BaS$ (D)
$2Sr+S_2=2SrS$ (D)