

Electronic Supplementary Information

**Aerosol-assisted CVD of cadmium diselenoimidodiphosphate and formation of a new
 $i\text{Pr}_2\text{N}_2\text{P}_3^+$ ion supported by combined DFT and mass spectrometric studies**

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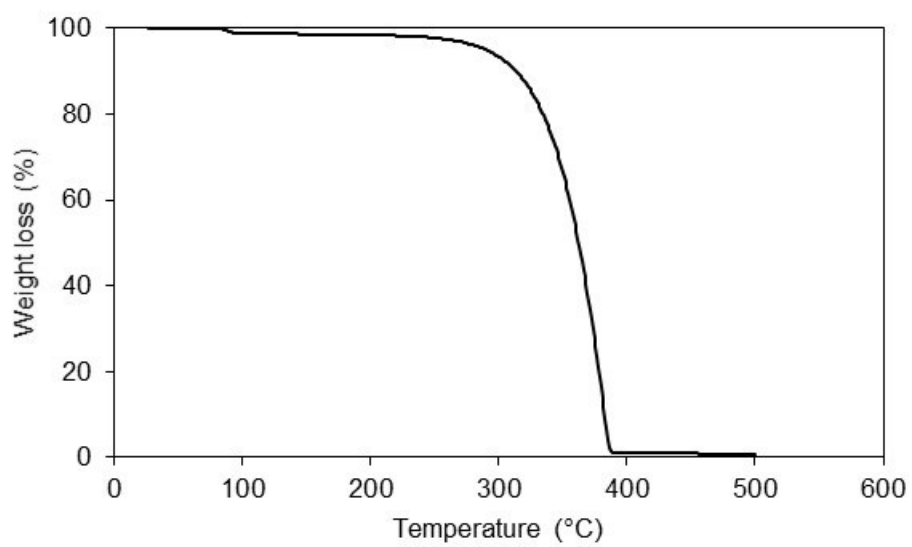


Fig. S1 Thermogravimetry analysis of Cd[(SePⁱPr₂)₂N]₂.

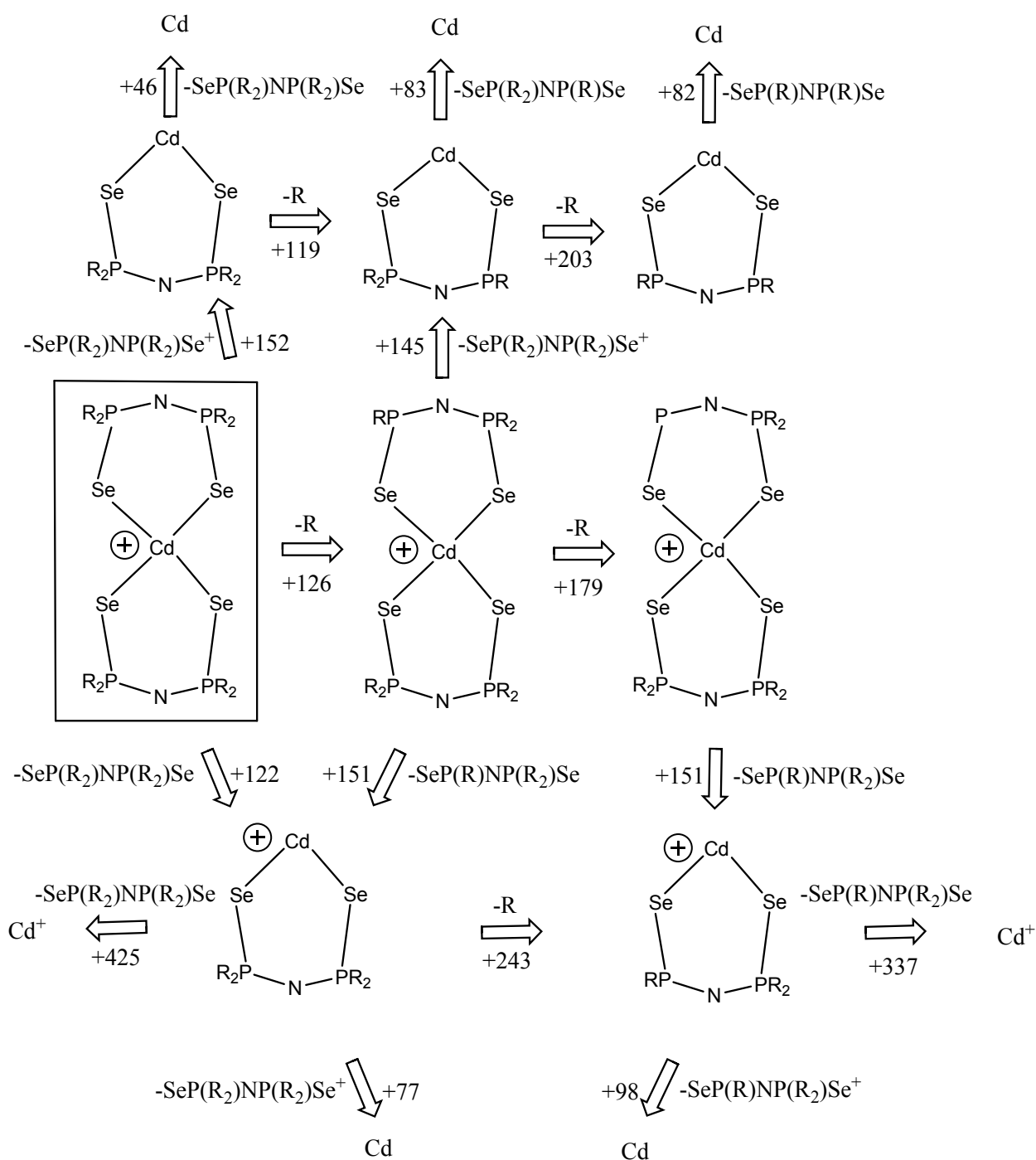


Fig. S2 The predicted breakdown of the ion $\text{Cd}(\text{SeP(R}_2\text{)-N-P(R}_2\text{)Se})_2^+$. Relative free energies are given in kJ mol^{-1} .

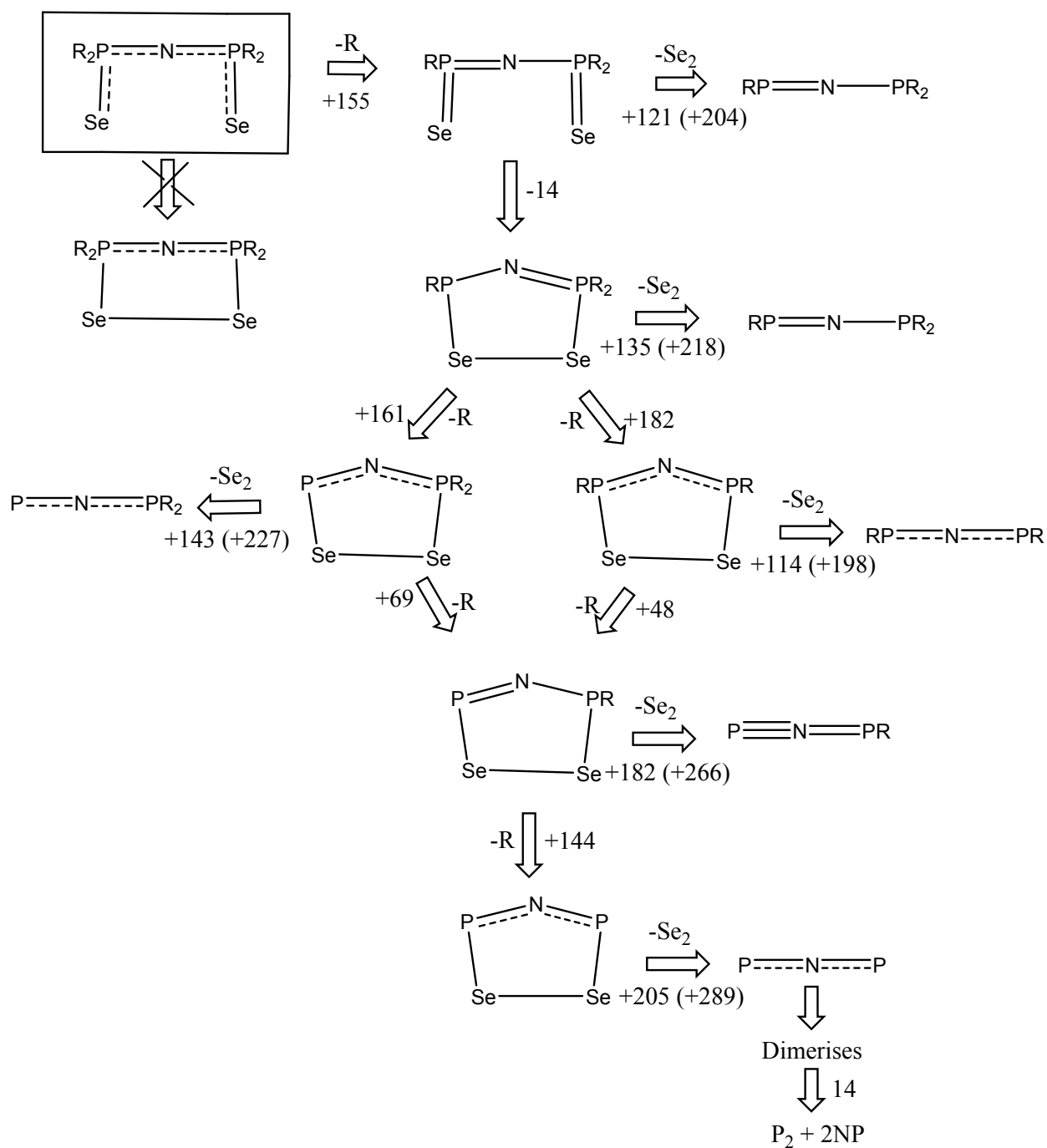


Fig. S3 The predicted breakdown of the neutral ligand. For loss of Se_2 two values are given the first being for the triplet dimer and the second (in brackets) for the singlet dimer. Relative free energies are given in $kJ\ mol^{-1}$.

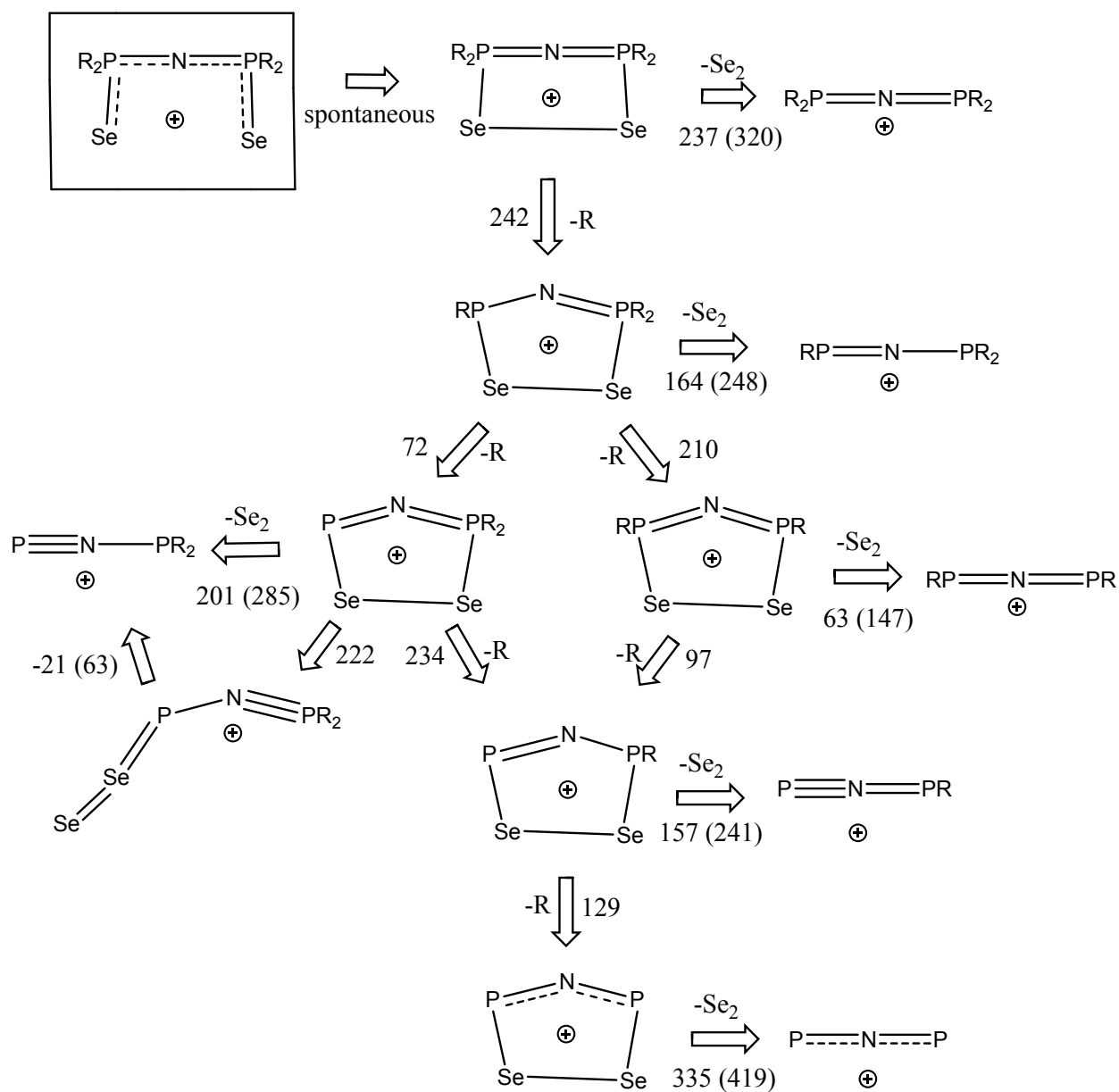


Fig. S4 The predicted breakdown of the positive ligand. For loss of Se_2 two values are given the first being for the triplet dimer and the second (in brackets) for the singlet dimer. Relative free energies are given in kJ mol^{-1} .

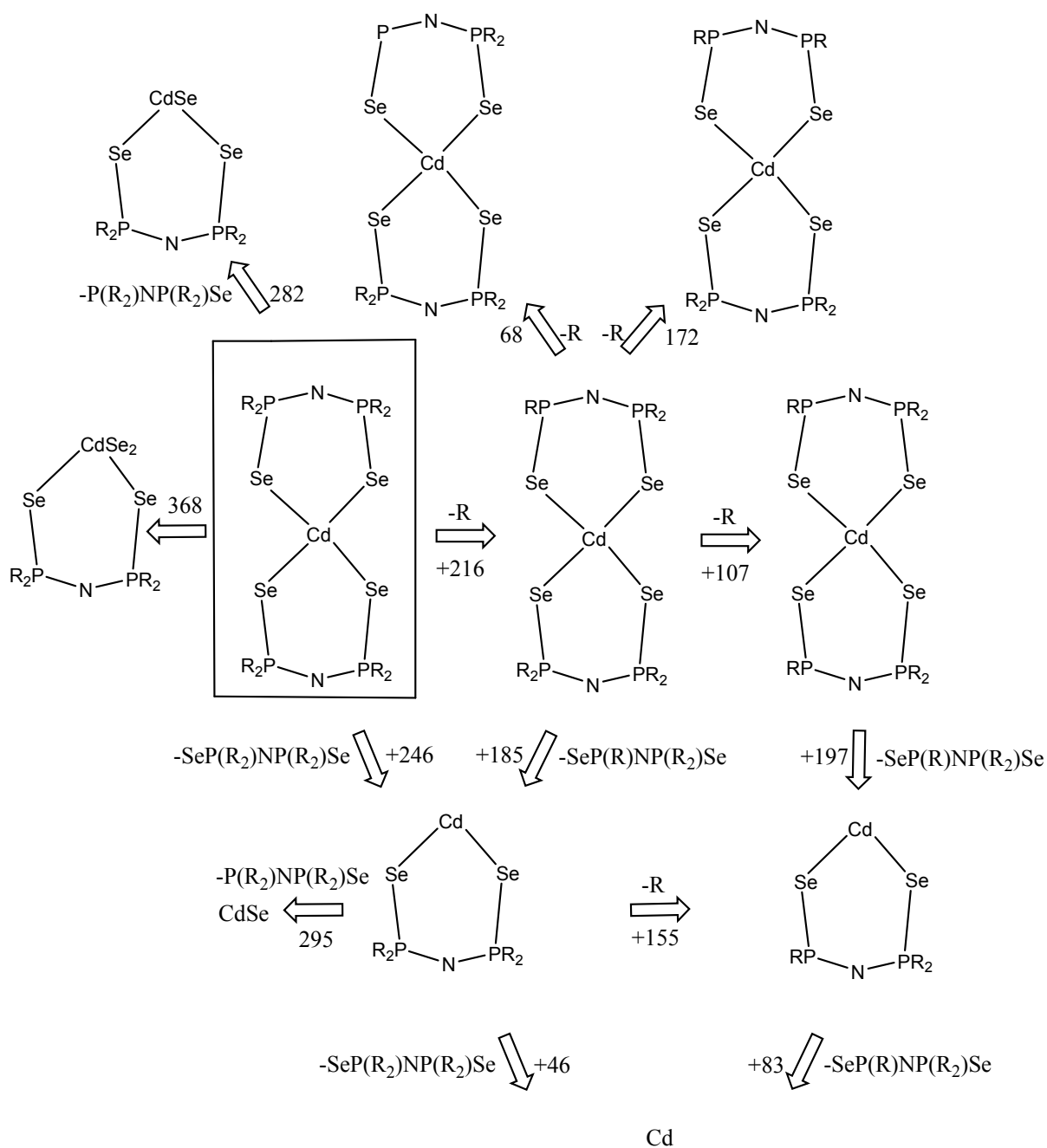


Fig. S5 The predicted breakdown of neutral complex (part I). Relative free energies are given in kJ mol^{-1} .

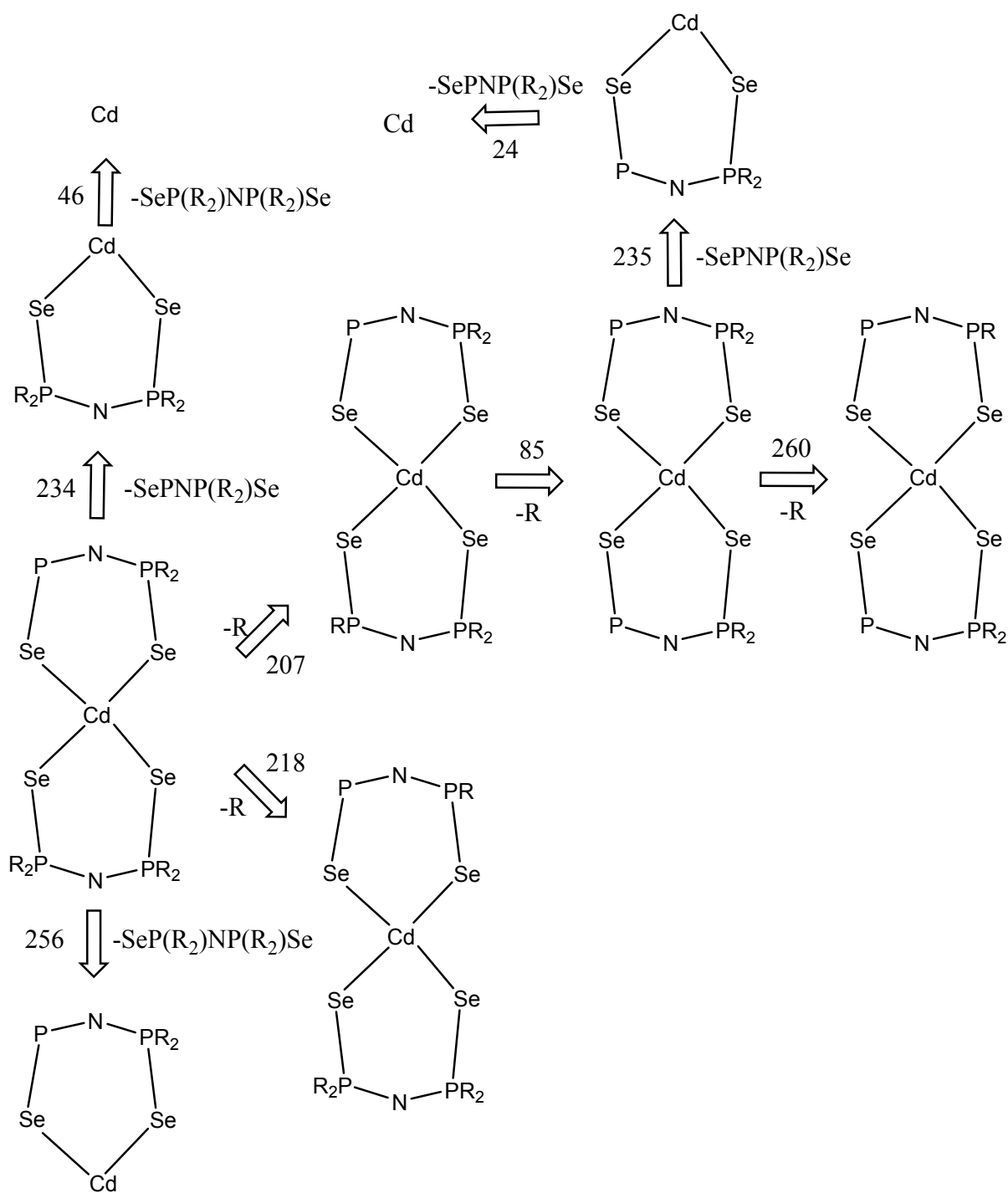


Fig. S6 The predicted breakdown of neutral complex (part II). Relative free energies are given in kJ mol^{-1} .