Supporting Information

The Reaction Mechanisms study For the F_3 system

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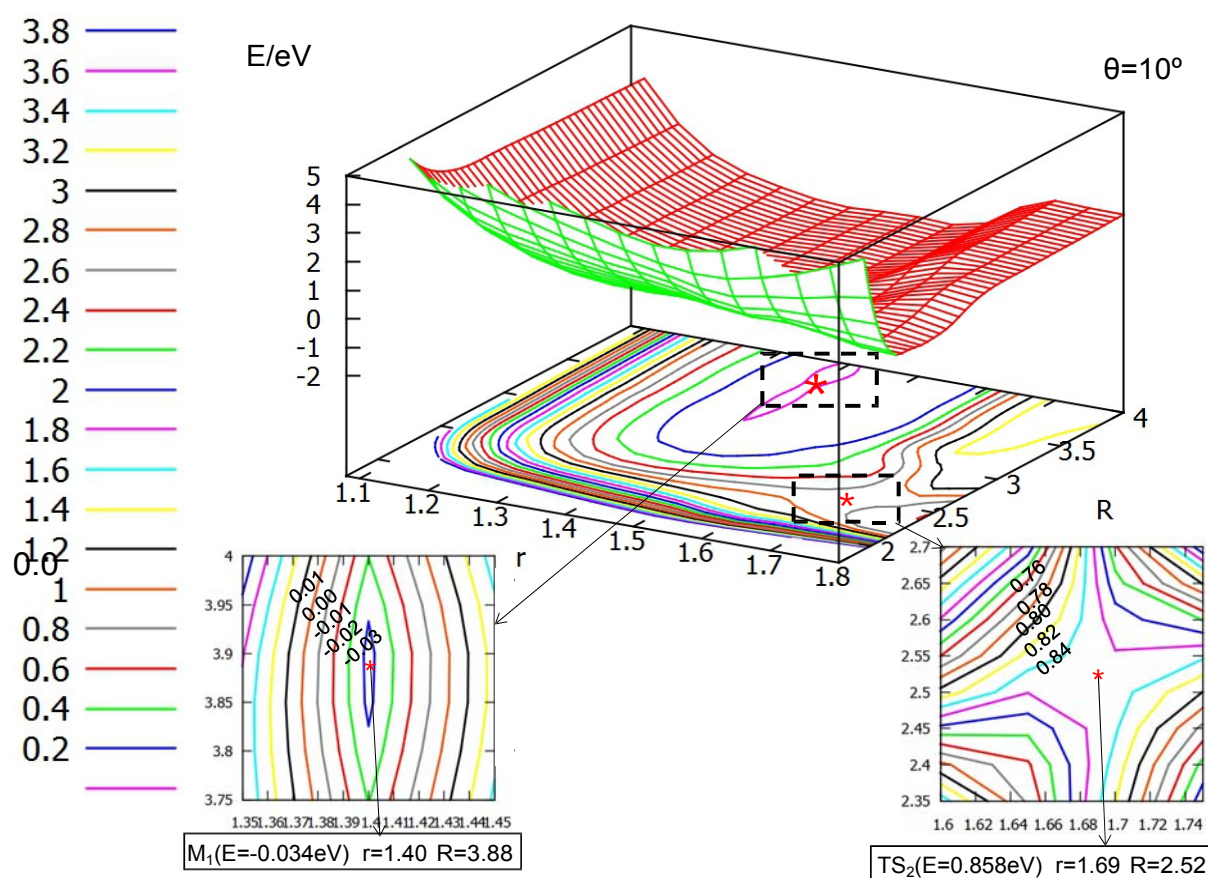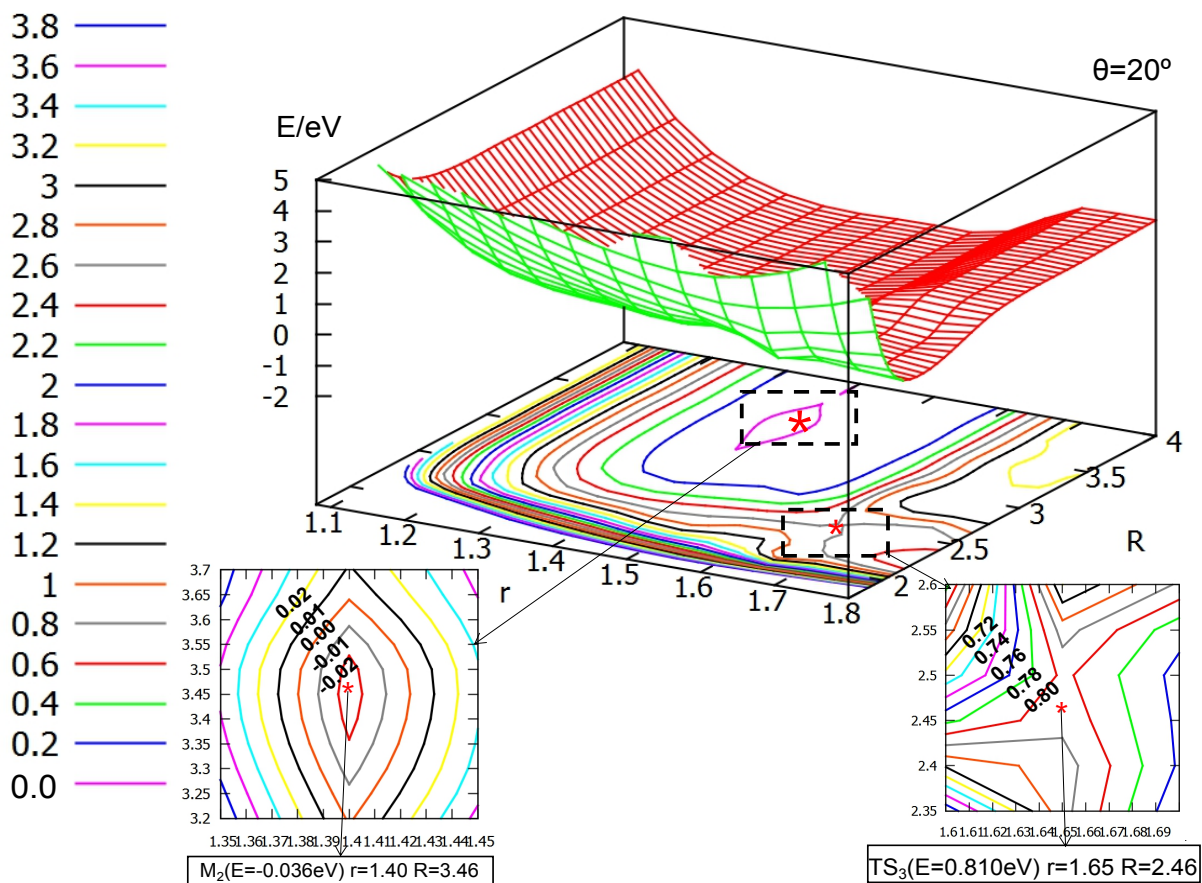[||]these authors contributed equally to this work.

Figure S1: Adiabatic potential energy surface (in eV) and contour plots of the potential energy surface for the ground state of F_3 as the function of r and R (in Å) for $\theta = 10°$. The importance isomer and transition sate are shown in the lower pannels.
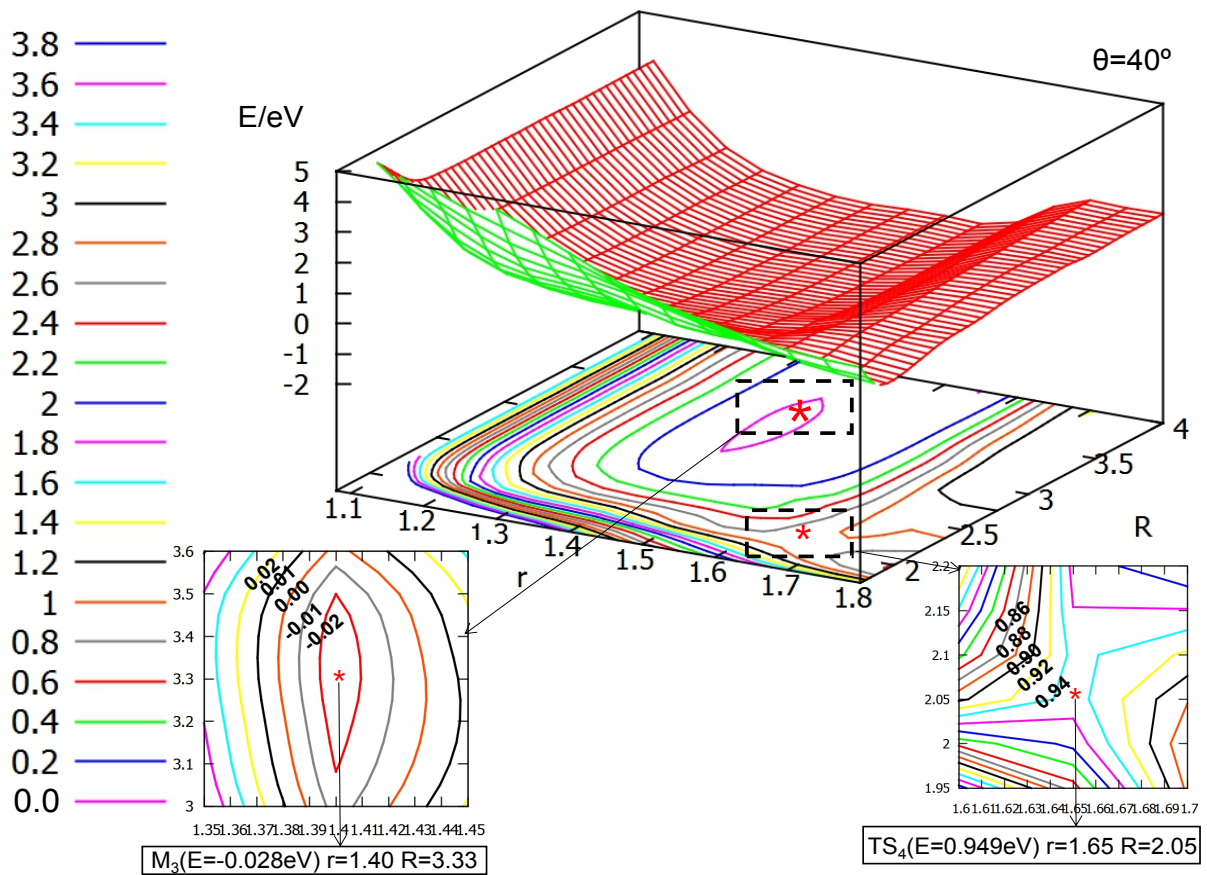
Figure 2: Adiabatic potential energy surface (in eV) and contour plots of the potential energy surface for the ground state of F_3 as the function of r and R (in Å) for $\theta = 20°$. The importance isomer and transition sate are shown in the lower pannels.

Figure 3: Adiabatic potential energy surface (in eV) and contour plots of the potential energy surface for the ground state of F_3 as the function of r and R (in Å) for $\theta = 40°$. The importance isomer and transition sate are shown in the lower pannels.
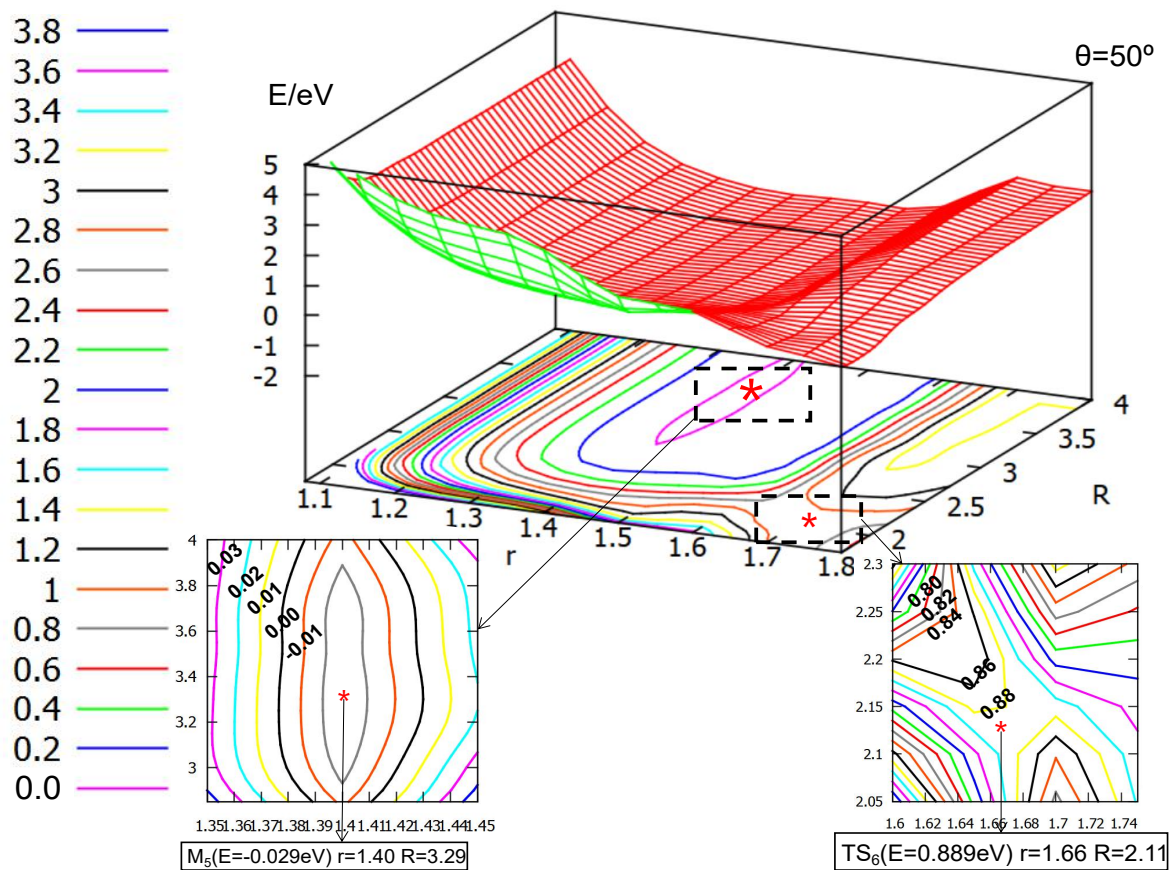
Figure 4: Adiabatic potential energy surface (in eV) and contour plots of the potential energy surface for the ground state of F_3 as the function of r and R (in Å) for $\theta = 50°$. The importance isomer and transition sate are shown in the lower pannels.
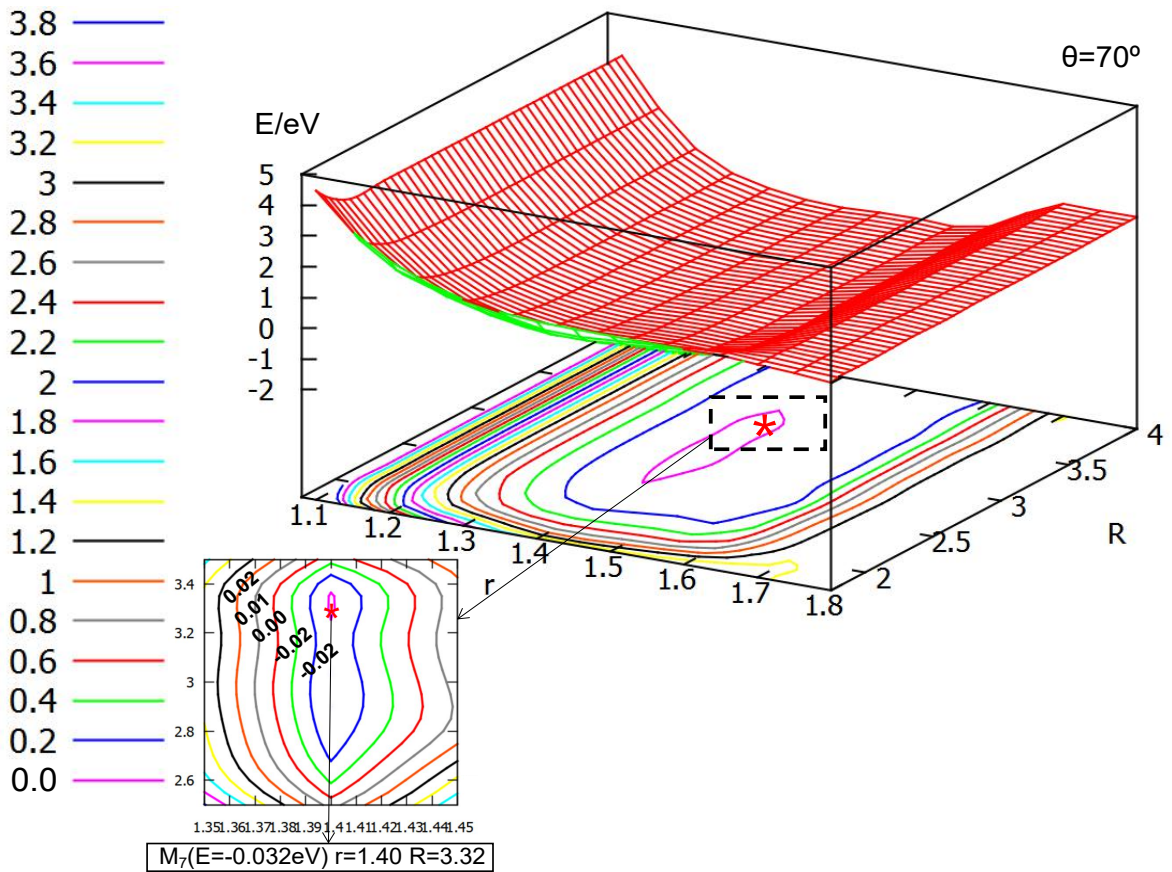
Figure 5: Adiabatic potential energy surface (in eV) and contour plots of the potential energy surface for the ground state of F_3 as the function of r and R (in Å) for $\theta = 70°$. The importance isomer is shown in the lower pannels.
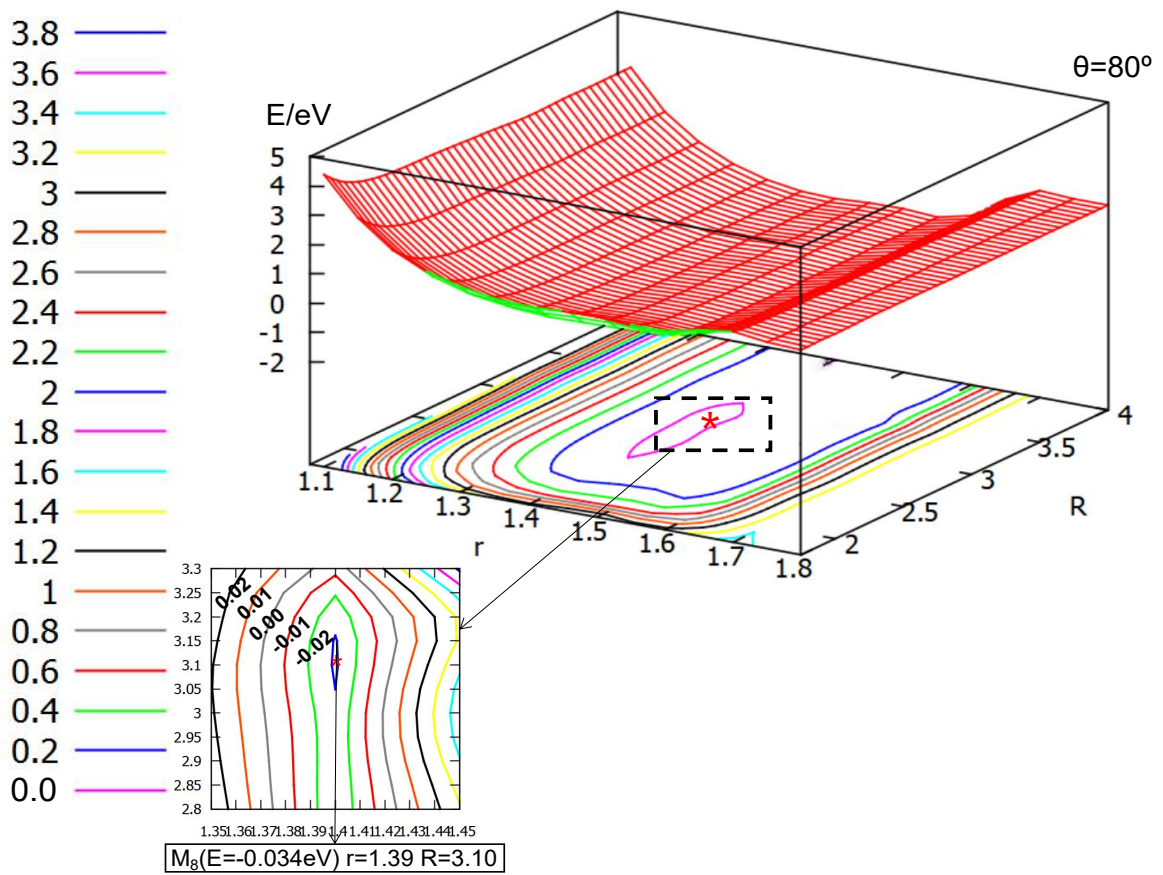
Figure 6: Adiabatic potential energy surface (in eV) and contour plots of the potential energy surface for the ground state of F_3 as the function of r and R (in Å) for $\theta = 80°$. The importance isomer is shown in the lower pannels.