

# **Supplementary Materials for: Simulating Absorption Spectra of Flavonoids in Aqueous Solution: a Polarizable QM/MM Study**

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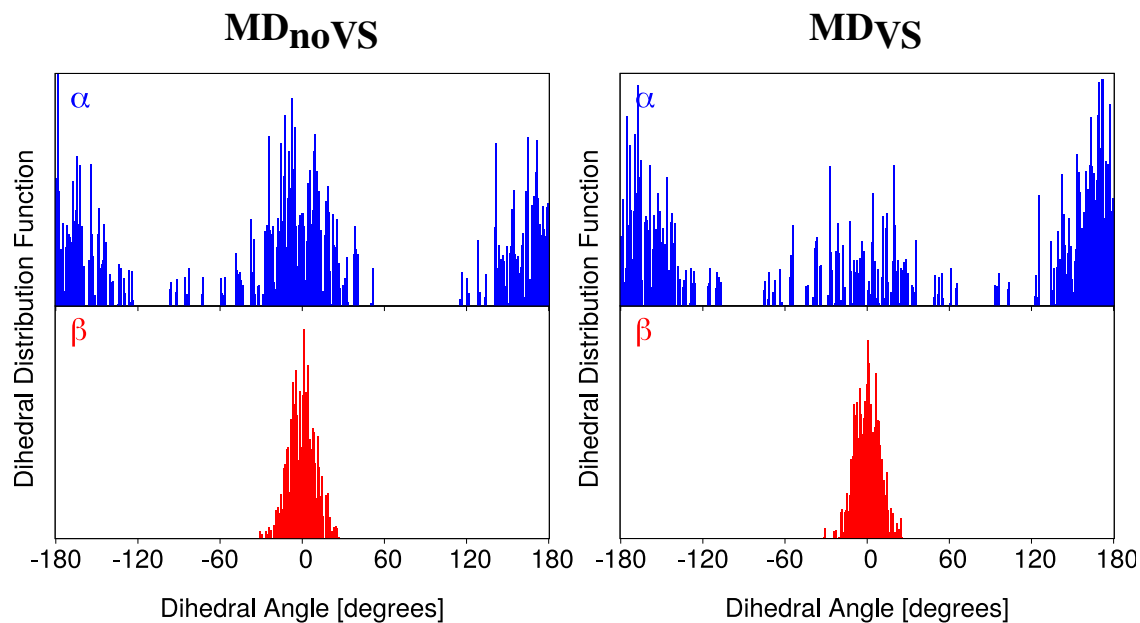


Figure S1: Dihedral distribution functions of  $\alpha$  (top,blue),  $\beta$  (bottom,red) dihedral angles of Luteolin (**L**) as obtained from MD<sub>noVS</sub> (left) and MD<sub>VS</sub> (right).

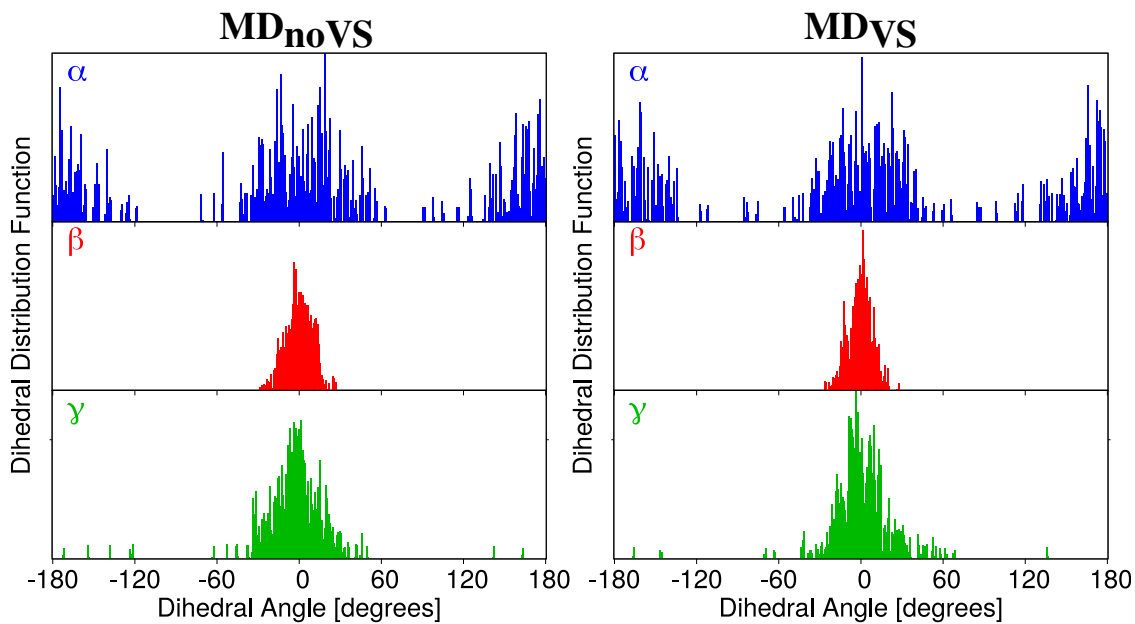


Figure S2: Dihedral distribution functions of  $\alpha$  (top,blue),  $\beta$  (middle,red) and  $\gamma$  (bottom,green) dihedral angles of Kaempferol (**K**) as obtained from MD<sub>noVS</sub> (left) and MD<sub>VS</sub> (right).

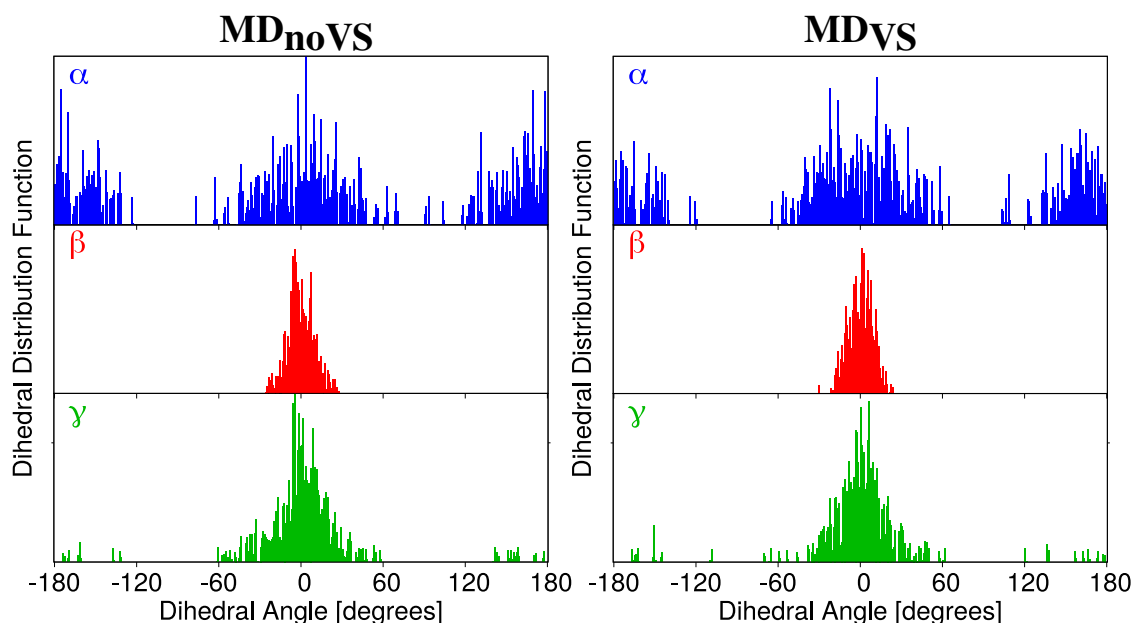


Figure S3: Dihedral distribution functions of  $\alpha$  (top,blue),  $\beta$  (middle,red) and  $\gamma$  (bottom,green) dihedral angles of Quercetin (Q) as obtained from MD<sub>noVS</sub> (left) and MD<sub>vS</sub> (right).

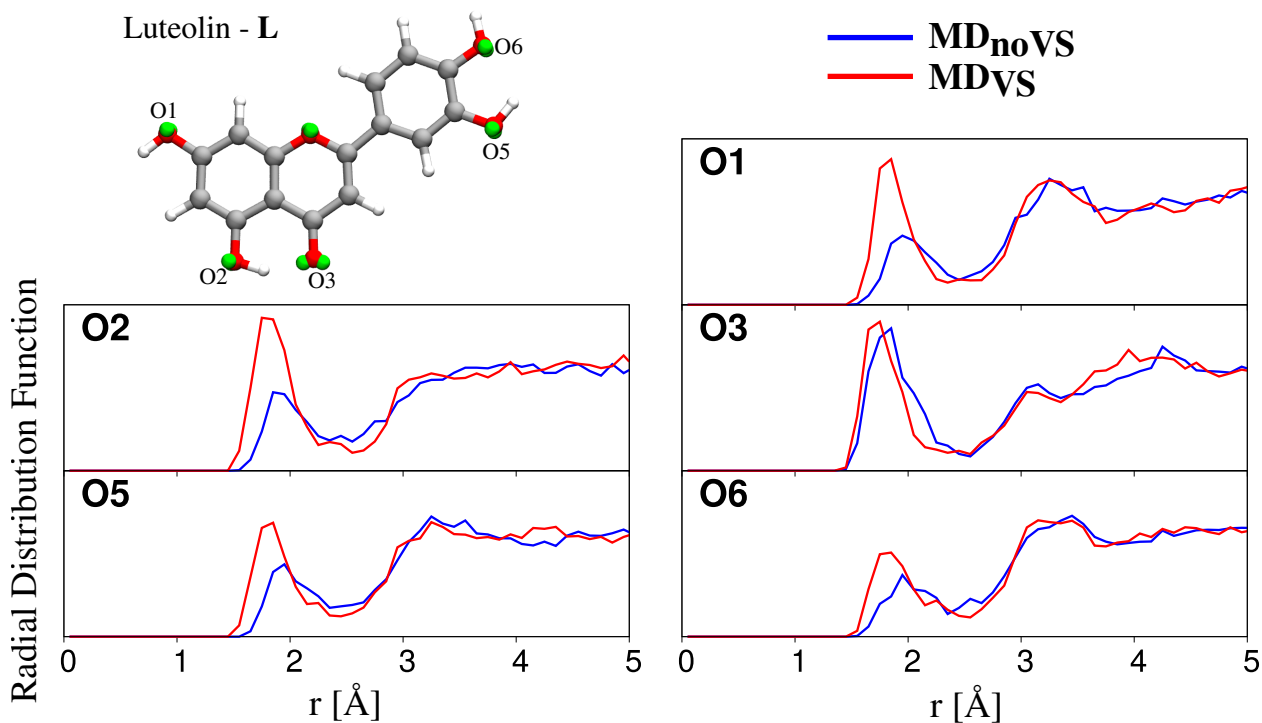


Figure S4: Radial distribution functions between selected Oxygen atoms of Luteolin and water Hydrogen atoms as obtained from MD<sub>noVS</sub> (blue) and MD<sub>vS</sub> (red).

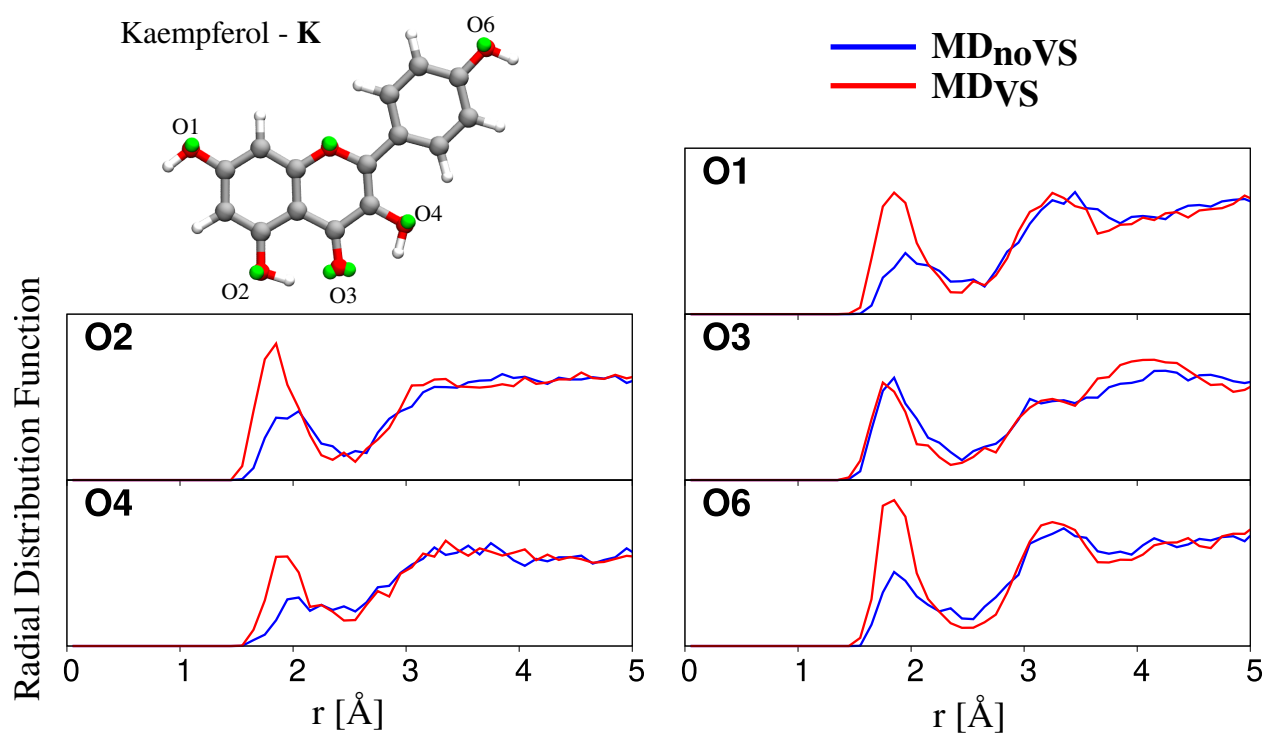


Figure S5: Radial distribution functions between selected Oxygen atoms of Kaempferol and water Hydrogen atoms as obtained from MD<sub>noVS</sub> (blue) and MD<sub>VS</sub> (red).

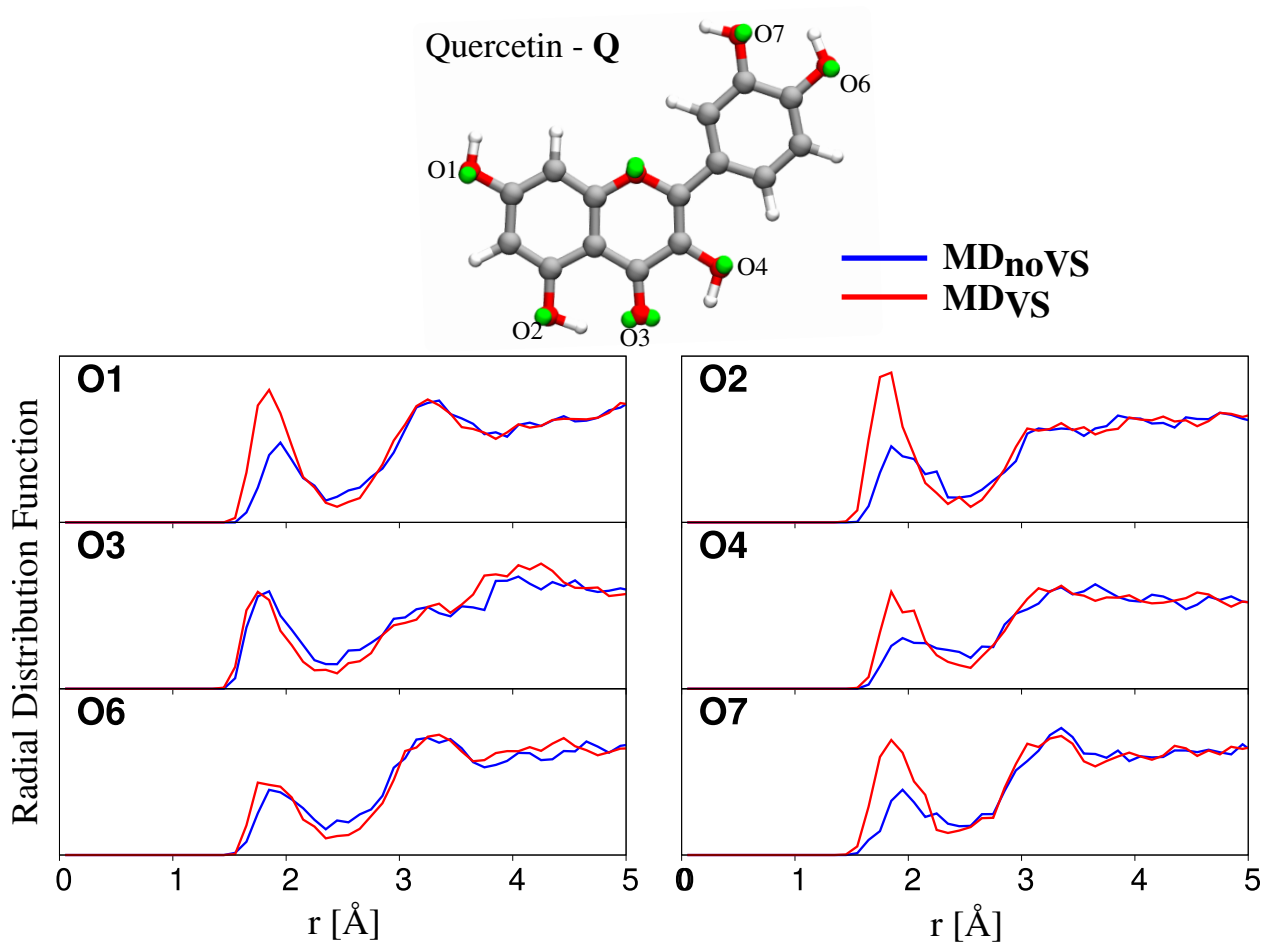


Figure S6: Radial distribution functions between selected Oxygen atoms of Quercetin and water Hydrogen atoms as obtained from MD<sub>noVS</sub> (blue) and MD<sub>VS</sub> (red).

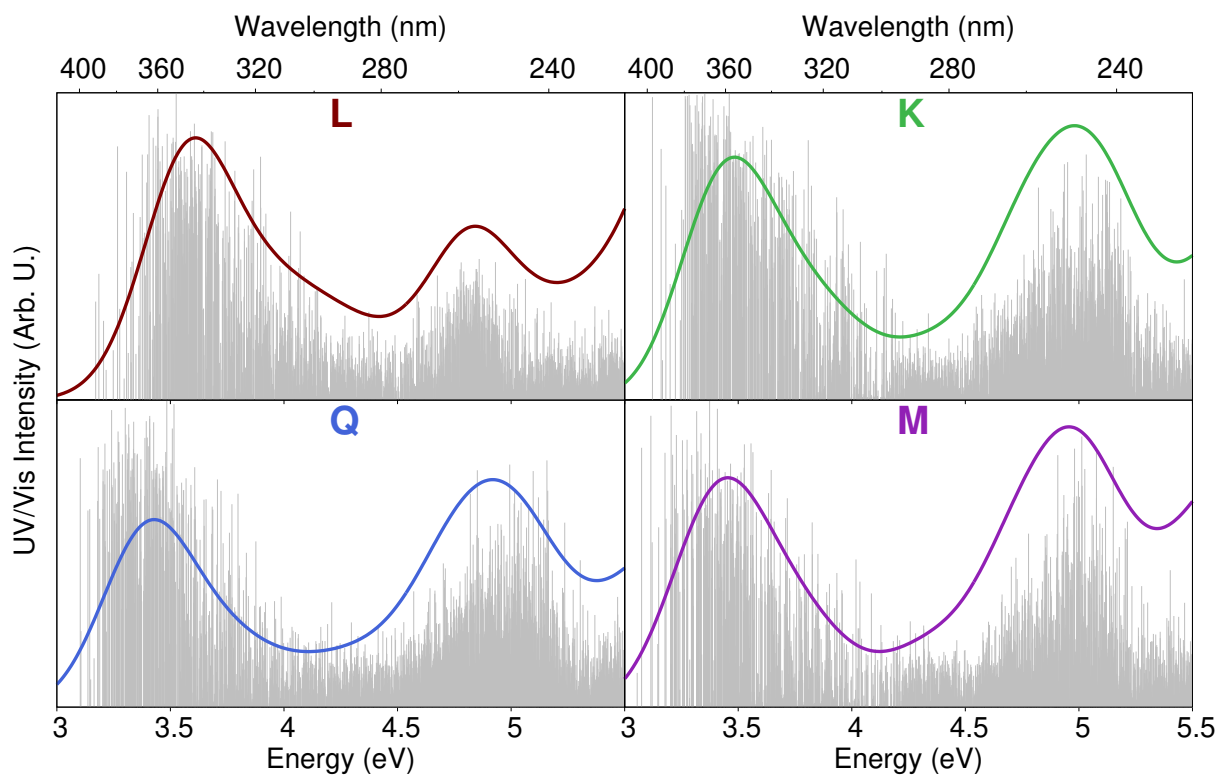


Figure S7: QM/FQ UV/Vis stick spectra computed on the snapshots extracted from MD<sub>VS</sub>. The convoluted QM/FQ spectra are also plotted.

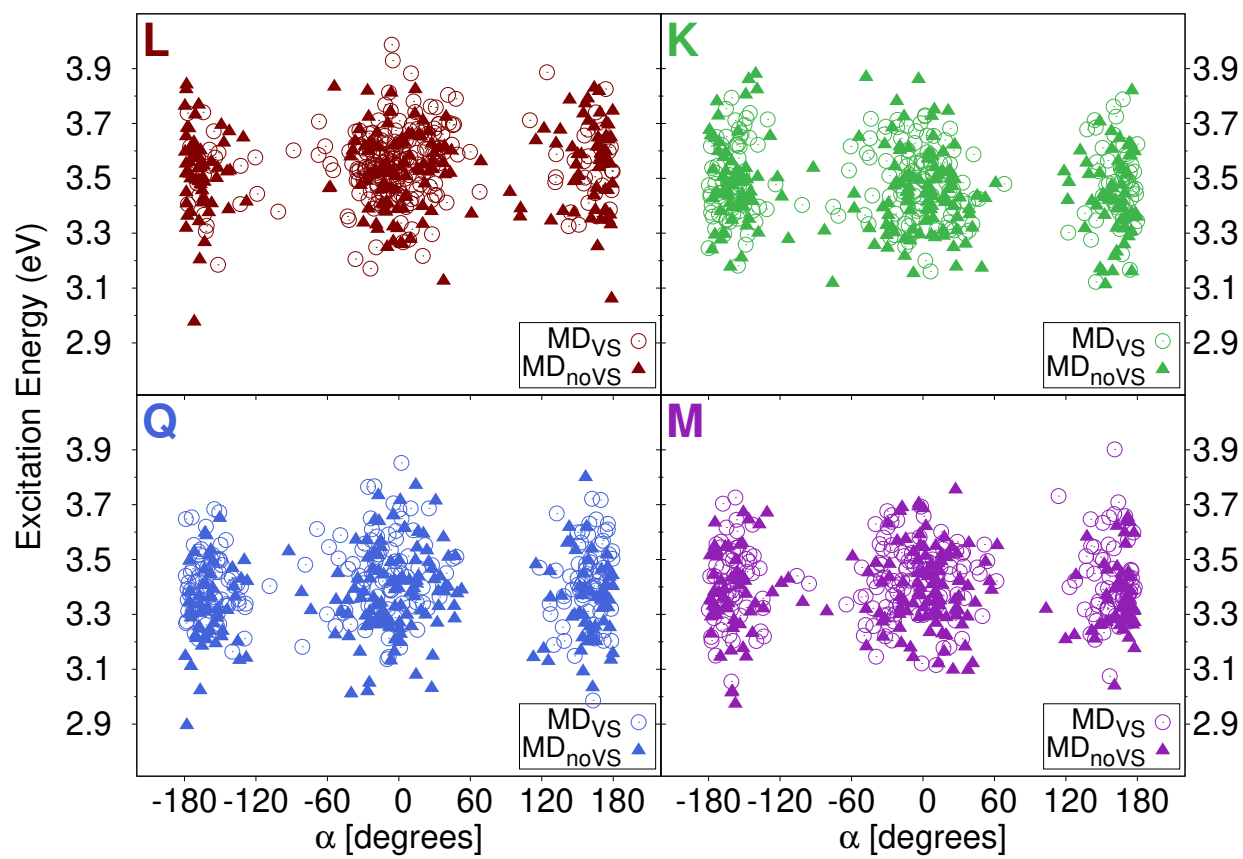


Figure S8: QM/FQ Excitation Energies of the first electronic transition as a function of  $\alpha$  dihedral angle.

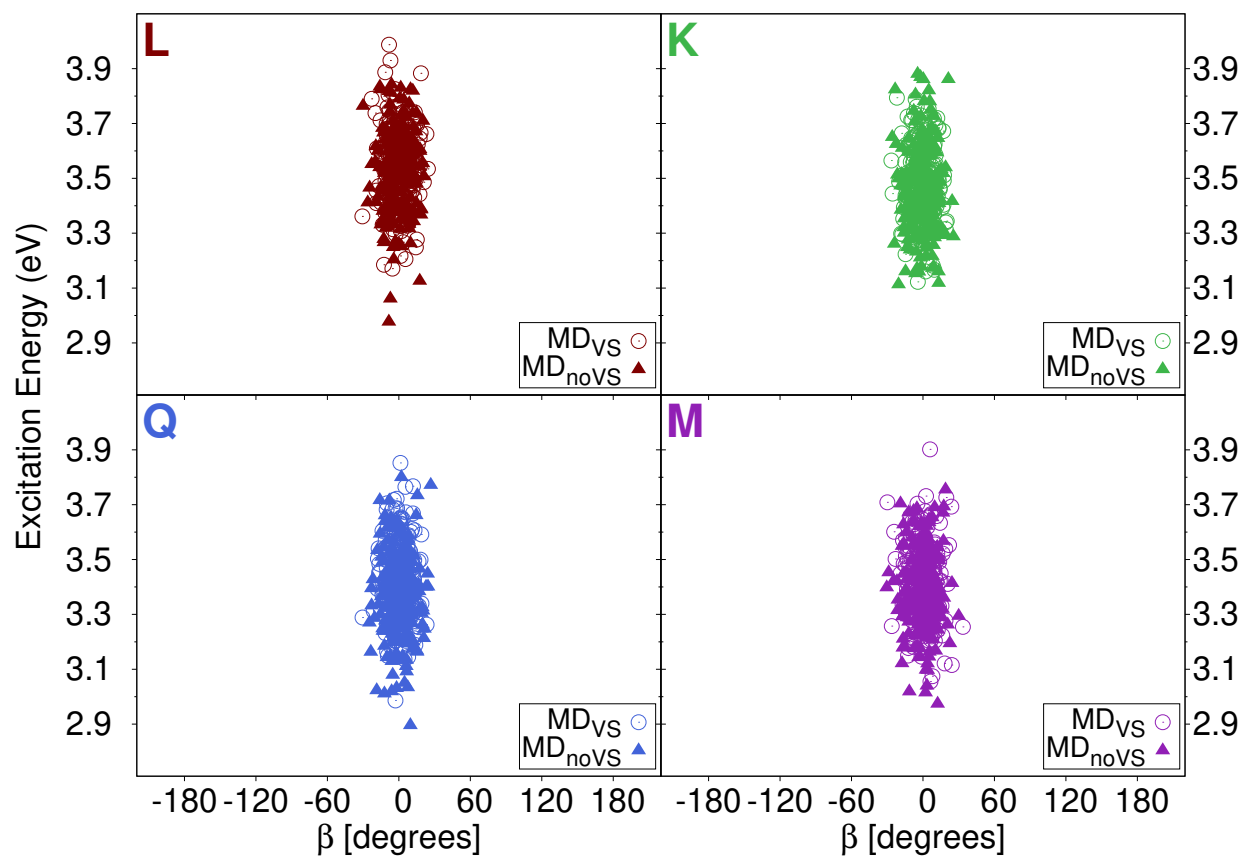


Figure S9: QM/FQ Excitation Energies of the first electronic transition as a function of  $\beta$  dihedral angle.



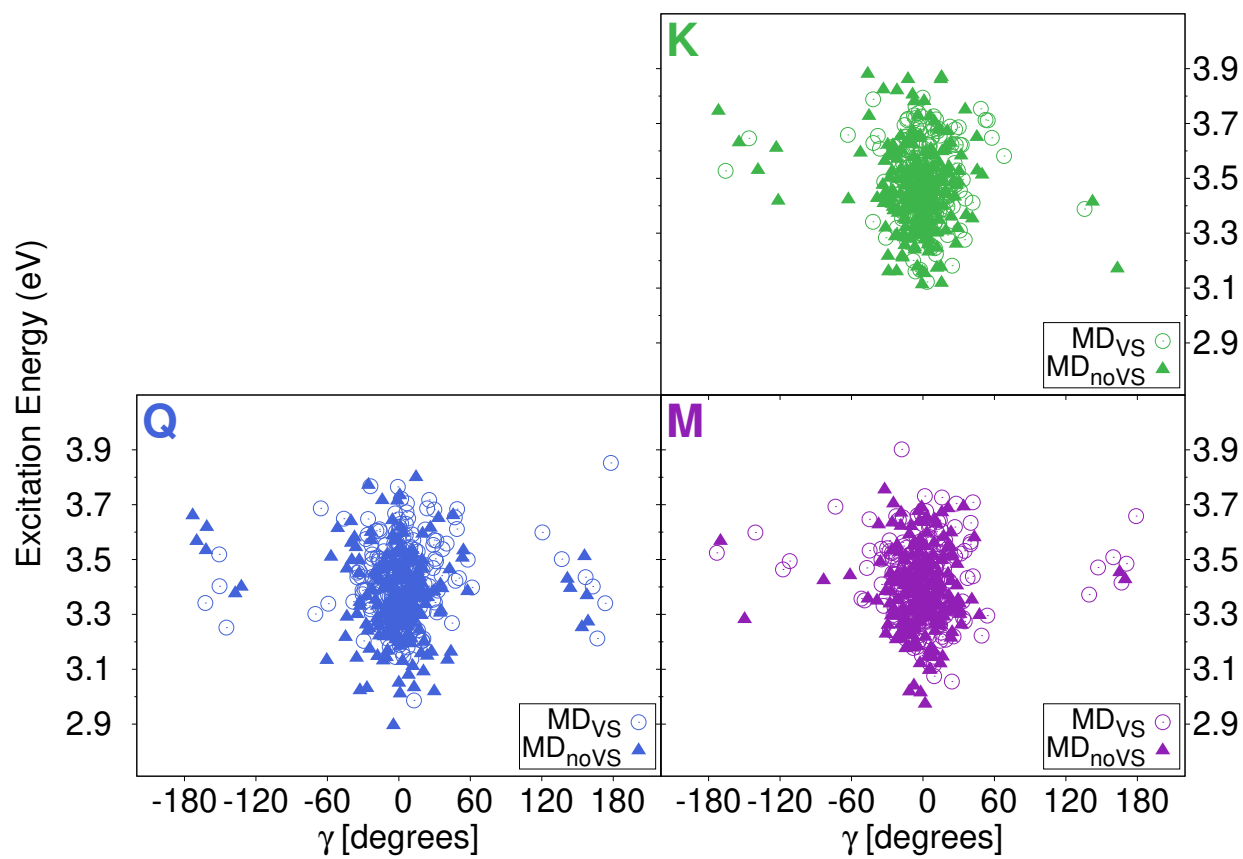


Figure S10: QM/FQ Excitation Energies of the first electronic transition as a function of  $\gamma$  dihedral angle.