

Exercise Session 8

IESM Fall 2022-2023

Andrea Levy, Beatriz Bueno Mouriño, Simon Dürr, Sophia Johnson

December 16, 2022

Course Reminders

Course Reminders:

- Exercises 8 and 9 will not have interviews and will have due date **31. January**
- Plus, we only keep the best grades of 8 of 9 reports :)
- Feel free to contact us via email or forum for questions about Ex8 and Ex9 !

Exercise 8 Finding transition states

In this set of exercises, we will learn how to traverse the potential energy landscape in interesting directions toward transition states.

Learning goals

- Understand how to navigate the PES to transition states
- Visualize chemical reactions

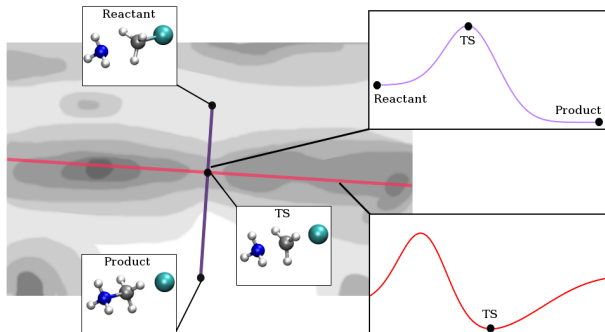
Chapter in script

Not in script but of practical relevance

Resources

Frank Jensen - Computational Chemistry
Ch12.8 p.416ff

Minimum Energy Path



- We need to find stationary points, for TS we need the Hessian with exactly one negative eigenvalue.

Intrinsic Reaction Path



Reaction

- We look at the synthesis of propylene oxide

