

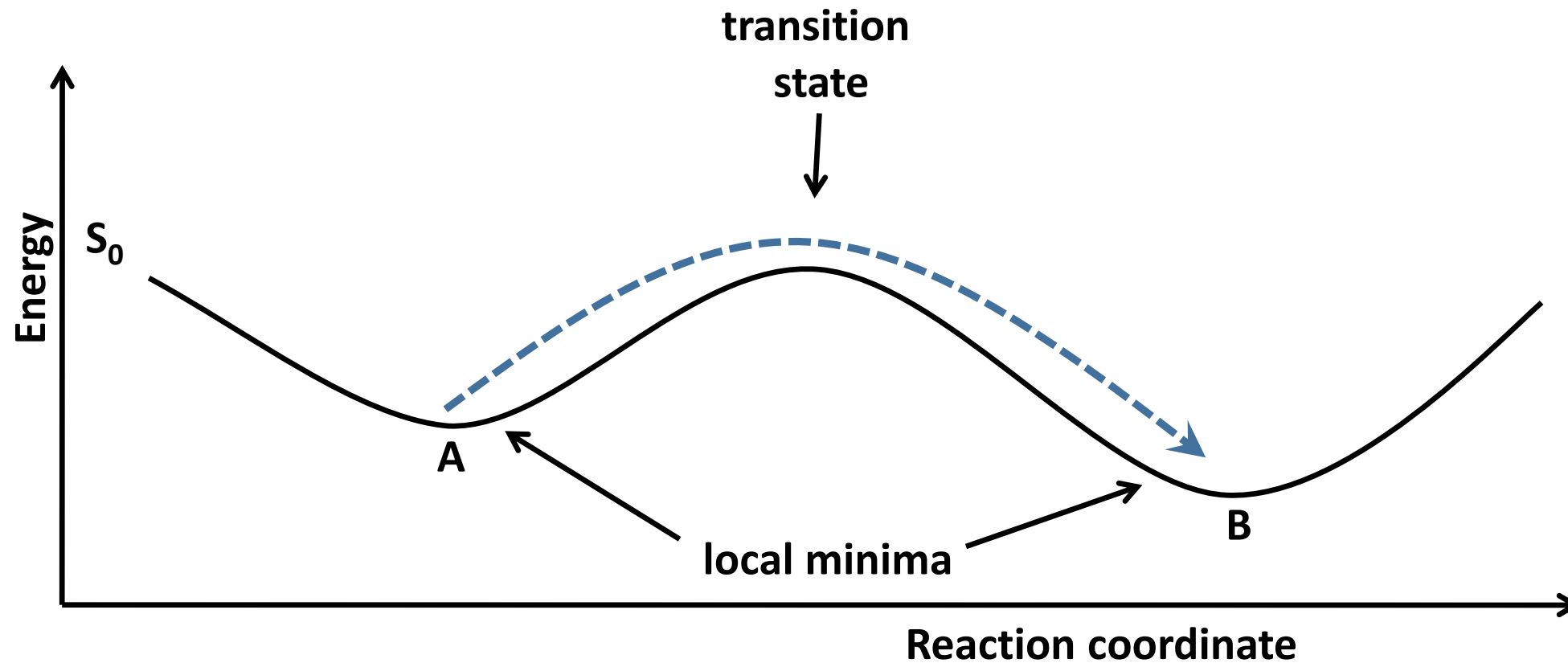
# Computational Photophysics

**Milan Ončák**

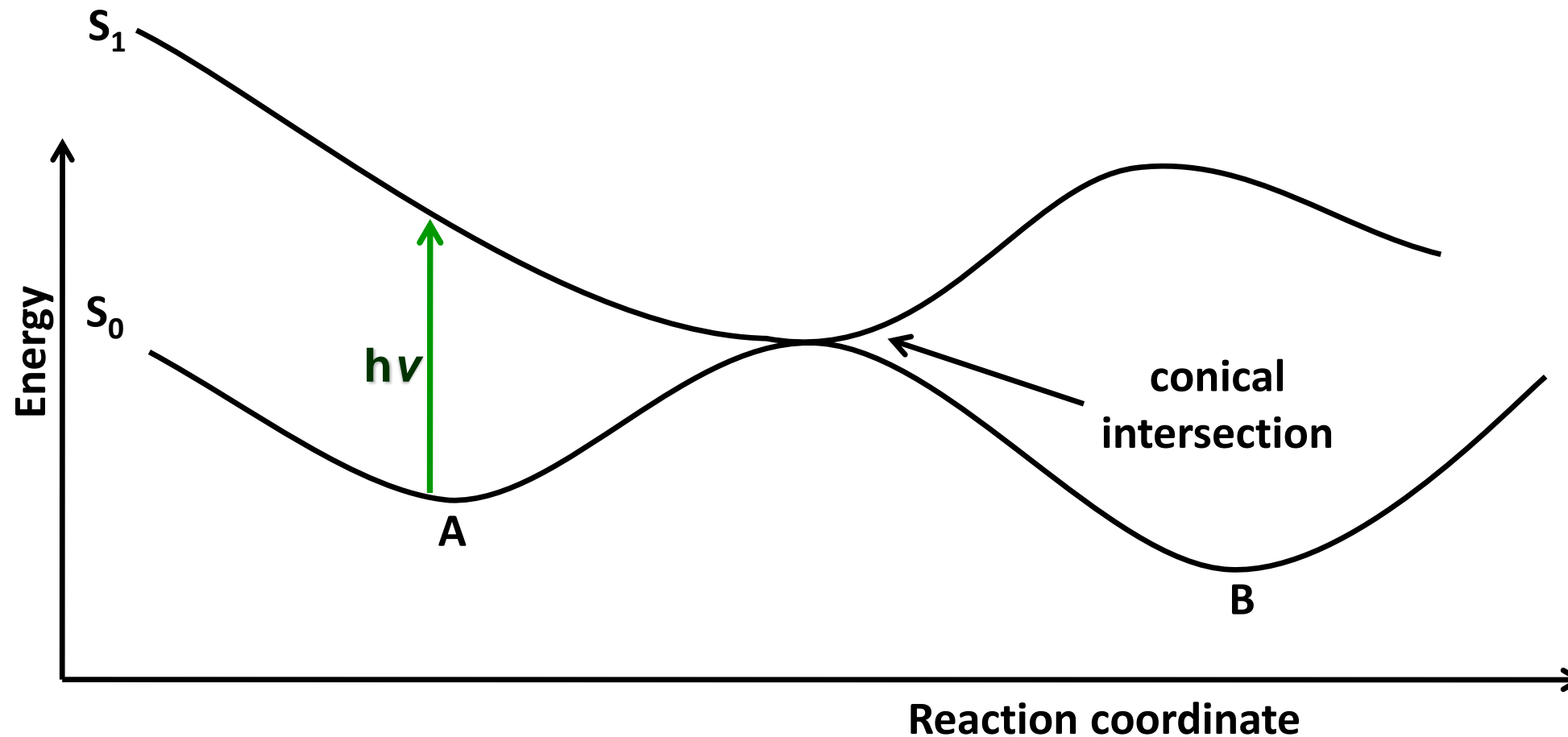
Institut für Ionenphysik und Angewandte Physik  
Universität Innsbruck

24.1.2020

# Chemistry – Microscopic Point of View



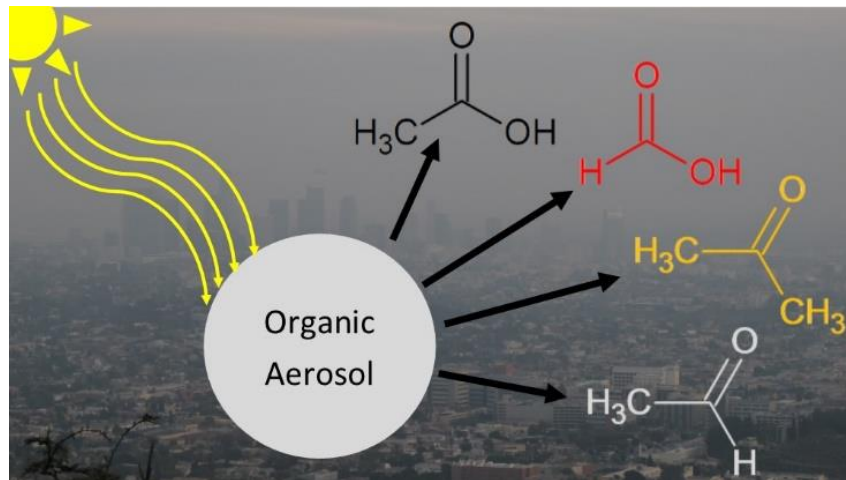
# Photochemistry – One More Dimension



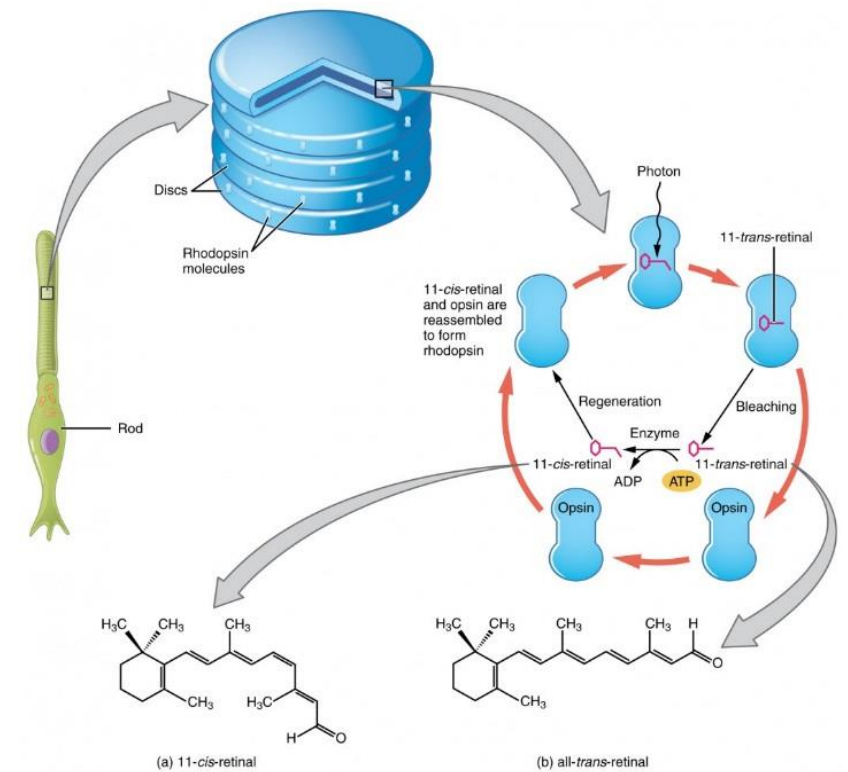
# Photochemistry – What is it good for?



color



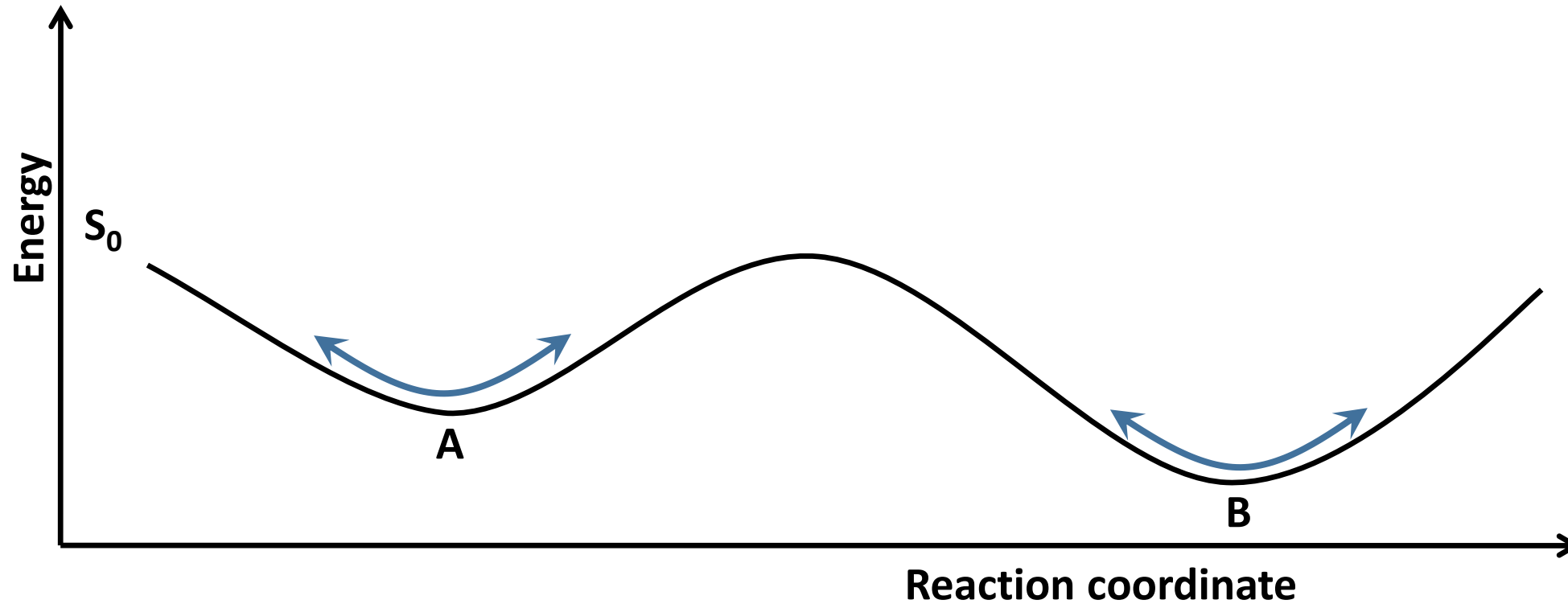
atmosphere



sight

# Computational Photochemistry

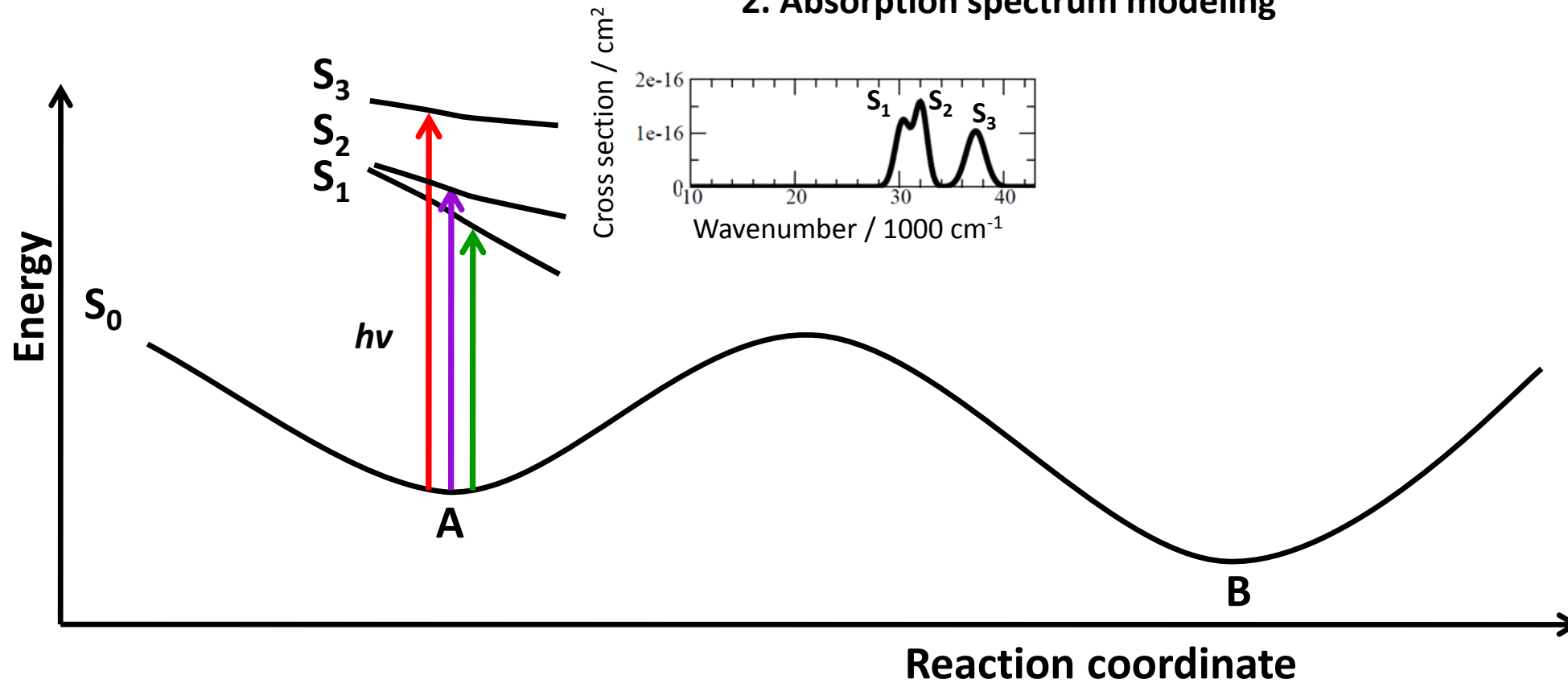
1. Ground state structure  $\hat{H}_{el}(r, R) \psi(r; R) = E_{el}(R) \psi(r; R)$



# Computational Photochemistry

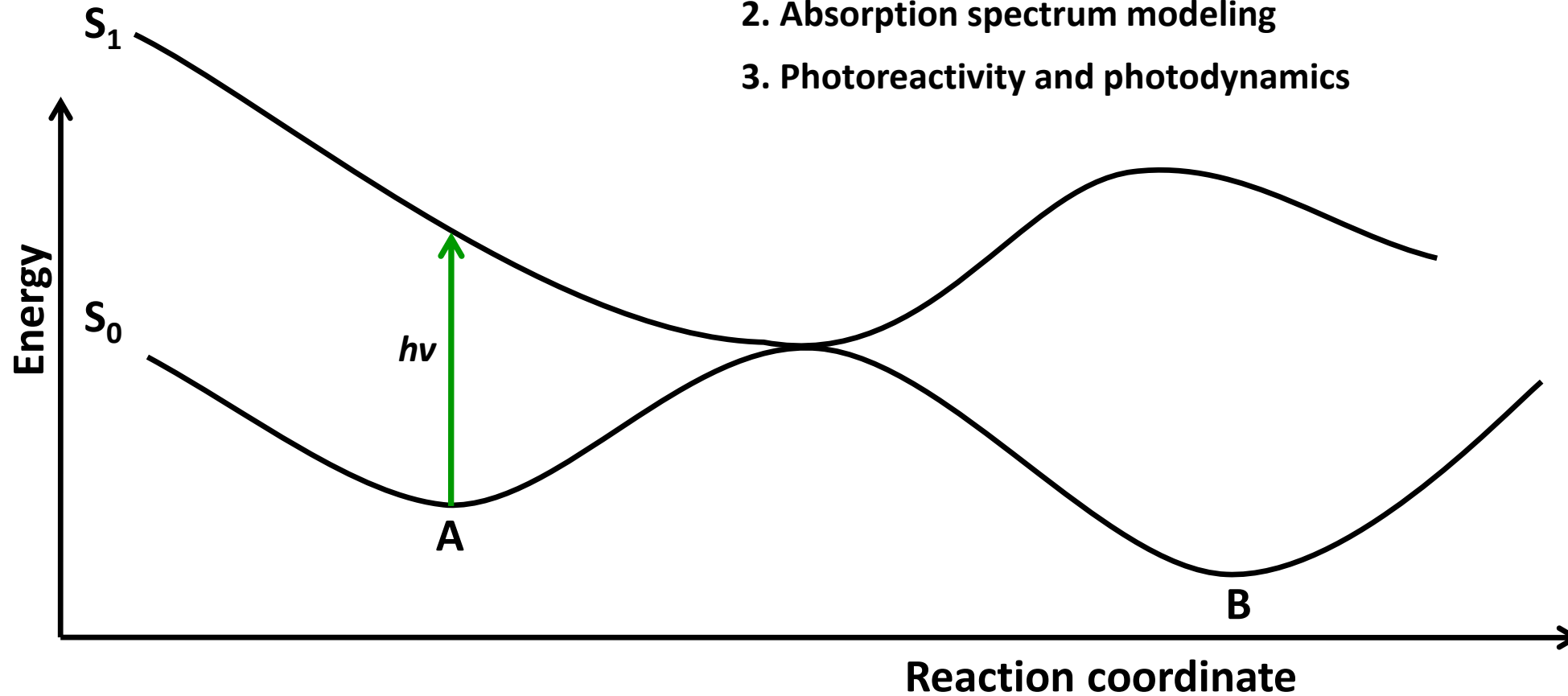
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2. Absorption spectrum modeling



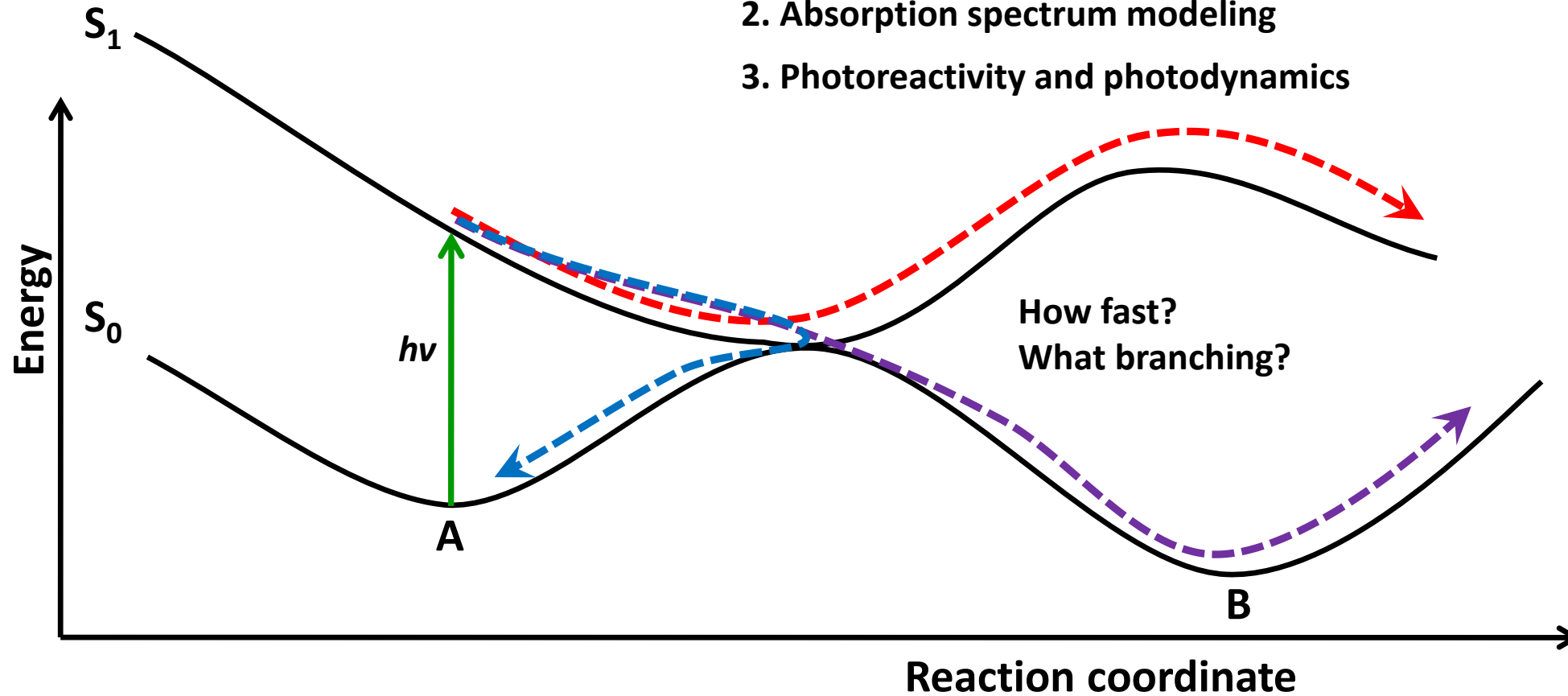
# Computational Photochemistry

1. Ground state structure  $\hat{H}_{el}(r, R) \psi(r; R) = E_{el}(R) \psi(r; R)$
2. Absorption spectrum modeling
3. Photoreactivity and photodynamics



# Computational Photochemistry

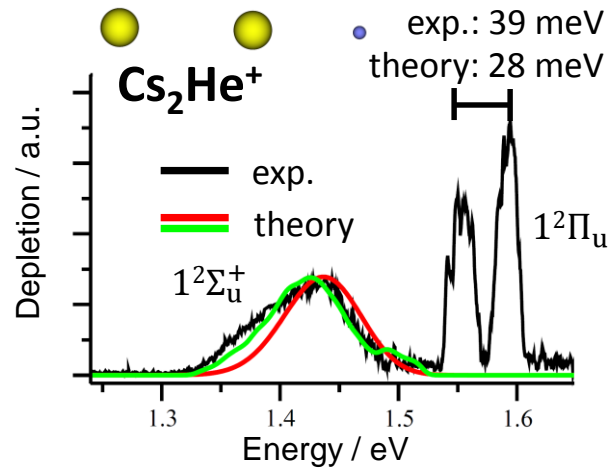
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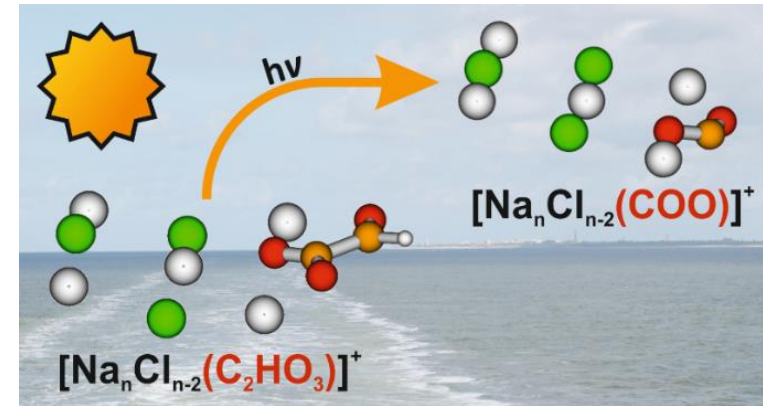


# Some Topics from Our Laboratory

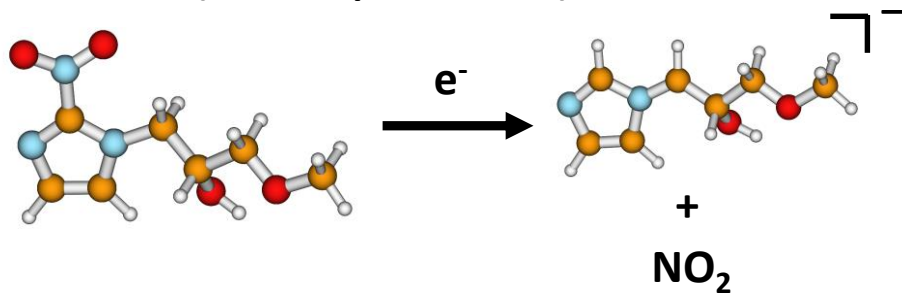
## Photochemistry of Ions in Helium Droplets (with Paul Scheier)



## Modeling of Aerosol Photochemistry (with Martin Beyer)



## Electron Attachment to Radiosensitizers (with Stephan Denifl)



## Photochemistry of Ions in/on Solids (with Oliver Diwald, Salzburg)

