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Femtosecond spectroscopy of the carotenoids in the main light-harvesting complex of plants

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Abstract content
   (Max 300 words)

The first step in photosynthesis constitutes highly efficient light harvesting and energy transfer in a set of membrane-bound pigment-protein complexes. One surprising aspect of the light-harvesting complexes of plants is that they are self-protected against damage due to over-illumination. A major component of the self-protection mechanism involves efficient switching between light-harvesting and energy-dissipating states. The role of the embedded carotenoids in this switching process is only little understood. Here, the excited-state dynamics of the carotenoids in the main light-harvesting complex of plants was investigated by performing a multi-colour, intensity-dependent femtosecond pump-probe study. It will be demonstrated how using this technique new electronic states can be resolved and how these states may be active in energy-quenching mechanisms.

Apply to be
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Level for award
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Hons

Main supervisor (name and email)
and his / her institution

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Would you like to <br> submit a short paper <br> for the Conference
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Yes

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