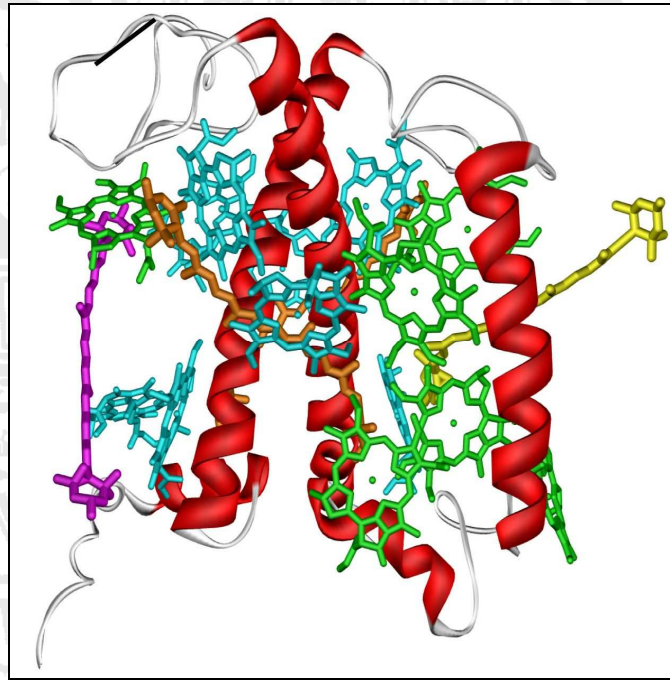


# PHYSIKALISCHES KOLLOQUIUM

AM 12. NOVEMBER 2012 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



## HOW NATURE HARVESTS SOLAR LIGHT

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The success of photosynthesis relies on two ultrafast processes: excitation energy transfer in the light-harvesting antenna followed by charge separation in the reaction center. Both processes occur with a quantum efficiency close to one, the natural system is highly adaptable, and self-protected. Crystal structure of a variety of light-harvesting complexes have become available over the last 15 years and many have been studied in great detail using ultrafast lasers and other advanced spectroscopic techniques. In this talk I will illustrate which 'design' lessons we have learned from nature that could inspire engineers to improve photosynthesis or in the construction of physical-chemical analogs.

[1] Scholes, GD, Fleming, GR, Olaya-Castro, A, van Grondelle, R (2011), NATURE CHEMISTRY, Volume: 3 (10), Pages: 763-774