

Institutsseminar

How does life interact with light?

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Most of the organic molecules, the basic building blocks of life, are transparent to visible light, except for a small group of molecules known as biochromophores. Biochromophores are responsible for vision, photo-synthesis (the process of harvesting solar energy), for exotic phenomena such as bioluminescence (for example in fireflies and jelly-fish) and for all the colors we see in nature. In this talk we will explore how tools developed originally for the study of nuclear and atomic physics provide an insight into the workings of these important molecules, and the basic quantum mechanical principles governing their behavior.

We will focus on the case of the retinal chromophore, which is the photon detector used in every known form of animal vision. We will show how the color of the chromophore can be tuned by its surrounding environment, which is critical for color vision. We will also discuss how to directly observe structural changes of the retinal chromophore using ion mobility spectroscopy.

Hörsaal G

17:15 Uhr

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