

Karl Friedrich Bonhoeffer Award Lecture



11 May 2016, 2 pm

Manfred Eigen Hall

MPI for Biophysical Chemistry
(Karl Friedrich Bonhoeffer Institute)

Peter Hegemann

Institute for Biology
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Channelrhodopsin and new inhibitory optogenetic approaches

In the new research field *optogenetics* which revolutionized the neurosciences during the past ten years applicants have employed channelrhodopsins for cell depolarization and light-driven ion pumps for cell inactivation. Since pumps only transport a single ion per absorbed photon we designed alternative inactivation concepts including chloride conducting channelrhodopsins (ChloC) and two component optogenetic approaches (TCOs) with intracellular or extracellular coupling that just began to be used in the neurosciences and cell biology.



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