

EINLADUNG

zum Vortrag von

Prof. Dr. Josef Friedrich

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Aspects of Protein Biophysics from Optical Experiments

am

Dienstag, dem 19. Oktober 2004, um 17.30 Uhr

im Großen Hörsaal des Instituts für Experimentalphysik der Universität Wien
1090 Wien, Strudlhofgasse 4 / Boltzmannngasse 5, 1. Stock

Abstract:

The folding of proteins into a unique stable structure is one of the most intriguing problems in biophysics. The characteristic feature which distinguishes proteins from random heteropolymers is the occurrence of a so-called stability gap in their energy landscape. We investigated the stability of a special cytochrome c-type protein using fluorescence techniques. The stability diagram comes up with many surprising features: There are regions where pressure stabilizes the native state and other regions where pressure denatures the protein. There are also regions where the entropy decreases, despite the fact that the protein unfolds. The native state itself obviously comprises a large manifold of structural states which the protein constantly explores, even in the deeply frozen state. This is most directly seen in so-called spectral diffusion experiments.

I will discuss various aspects of our experiments concerning protein stability and briefly touch on spectral diffusion dynamics as seen in hole burning experiments.

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Präsident 2003/04: Ao.Univ.Prof. Dr. Gerhard KAHL

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