

BNC webinars on pulsed X-ray sources and their applications

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Femtosecond X-ray pulses in action: molecular movies, ultrafast chemical reactions, magnetic switching and more...

Abstract: Modern pulsed X-ray sources offer unprecedented short and intense X-ray probes to study physical and chemical phenomena in their intrinsic time domains or at extreme conditions. The new era of time resolved investigations opened by the novel X-ray free electron lasers, like the European XFEL in Schenefeld, and ultra strong laser pulses, like the ELI initiative, enables to unravel the nature of femtosecond scale photochemical reactions, spin-state switching, ultrafast rearrangement of photoactive biochemical entities, temporal fluctuations of skyrmions, to name a few recent successful experiment. This review aims to give an introductory overview of recent and prospective applications of these new X-ray sources.