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ΔΙΑΛΕΞΗ

"Taming Quantum Molecular Dynamics: Theory and Applications"

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Αίθουσα σεμιναρίων στο ισόγειο του ΕΙΕ

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“Taming Quantum Molecular Dynamics: Theory and Applications”

The quest for deep understanding and control of the primary dynamical processes in molecules and nanoscale compounds is a theme of central importance in chemical physics and materials science. In this context, studies on quantum molecular dynamics are an indispensable part of the research towards monitoring such physical processes and designing ways how to guide them.

In this talk I present recent work on methodology for manipulating quantum dynamics by tuning external interactions in order to guide a physical process through interference between pathways connecting the initial state to the target state. I focus on applications of this technique in chemical physics and molecular materials science, as optical control of isomerisation in compounds with multiple equilibrium configurations and design of novel molecular electronics devices.