



AVVISO DI SEMINARIO

Il giorno **06 ottobre 2026** alle
ore 15:15

in aula **Grassano**
(dipartimento di Fisica)

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terrà un seminario dal titolo

SOLVATION APPROACH FOR DESCRIBING THE ROLE OF SOLVENT IN LIQUID-PHASE PROCESSES

Proponente: Prof. Roberto Paolesse



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ABSTRACT

It is known that the solvent shifts the equilibrium of complexation reactions, significantly affects their rate and mechanism, and acts both as a medium and as a direct participant in the reaction. Consequently, identifying the factors that regulate the course of reactions in solutions represents a key challenge in modern coordination chemistry.

To date, no general theory has been developed to describe the behavior of the solvent in chemical reactions. This is because the role of the solvent is multifaceted, and identifying the patterns of its influence on reaction pathways requires the study of a vast number of systems from multiple perspectives.

A number of approaches have been developed to describe the influence of solvents on the thermodynamic characteristics of complex formation. Some are based on correlations between the physicochemical properties of the solvent and the thermodynamic parameters of complexation.

Limited correlations often arise when a single physicochemical parameter exerts a predominant influence or when multiple parameters have synergistic effects. Therefore, approaches that analyze the thermodynamic characteristics of both complex formation and the solvation of reagents — particularly as the solvent composition is varied — hold universal significance.

Thus, the solvent acts both as a medium and as a direct participant in the chemical process. This duality forms the basis of the concept of the dual role of the solvent in complexation reactions.