

Dr Michalis Velegrakis is physicist and received his PhD from Physics Department, University of Bielefeld-Germany) and now He is Research Director at IESI-FORTH. Since 1992 he has grounded in IESI-FORTH (with external funding and grants -e.g. Volkswagen Stiftung) the **Cluster Physics and Chemistry Laboratory** with activities that belong to the areas of Molecular Physics and Spectroscopy, Physical Chemistry and Materials Science. Using molecular beams and employing advanced mass spectrometric, laser spectroscopic and crossed molecular beam scattering in combination with imaging techniques the research targets to the understanding the formation mechanisms, the stability, the structure (geometric and/or electronic) and the properties (optical activity, chemical reactivity, catalytic activity) of clusters and also to study materials made out of clusters (bionanoconjugates). Since 2011, He started with **photonics applications in agrofoods and environment**. These concerns the use of optical spectroscopy for a) smart agriculture application such as the identification and quality control investigations in foods (e.g. wines, olive oil quality and adulteration etc.) by monitoring the spectroscopic fingerprints through the entire manufacturing process from field to the final product and b) to detect trace gases (greenhouse Gases) in environment using remote sensing based on laser spectroscopy. He is principal investigator or participates to a series of national and international funding programmes.