

The 12th International Workshop on Desorption Induced by Electronic Transitions (DIET XII)
(Pine Mountain, Georgia, USA, 19–23 April 2009)

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2010 J. Phys.: Condens. Matter 22 080301

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FOREWORD

The 12th International Workshop on Desorption Induced by Electronic Transitions (DIET XII) (Pine Mountain, Georgia, USA, 19–23 April 2009)

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The 12th International Workshop on Desorption Induced by Electronic Transitions (DIET XII) took place from 19–23 April 2009 in Pine Mountain, Georgia, USA. This was the 12th conference in a strong and vibrant series, which dates back to the early 1980s. DIET XII continued the tradition of exceptional interdisciplinary science and focused on the study of desorption and dynamics induced by electronic excitations of surfaces and interfaces. The format involved invited lectures, contributed talks and a poster session on the most recent developments and advances in this area of surface physics.

The Workshop International Steering Committee and attendees wish to dedicate DIET XII to the memory of the late Professor Theodore (Ted) Madey. Ted was one of the main pioneers of this field and was one of the primary individuals working to keep this area of science exciting and adventurous. His overall contributions to surface science were countless and his contributions to the DIET field and community were enormous. He is missed and remembered by many friends and colleagues throughout the world.

The papers collected in this issue cover many of the highlights of DIET XII. Topics include ultrafast electron transfer at surfaces and interfaces, quantum and spatially resolved mapping of surface dynamics and desorption, photon-, electron- and ion-beam induced processes at complex interfaces, the role of non-thermal desorption in astrochemistry and astrophysics and laser-/ion-based methods of examining soft matter and biological media.

Although the workshop attracted many scientists active in the general area of non-thermal surface processes, DIET XII also attracted many younger scientists (i.e., postdoctoral fellows, advanced graduate students, and a select number of advanced undergraduate students). This field has had an impact in a number of areas including nanoscience, device physics, astrophysics, and now biophysics. We believe that this special issue of *Journal of Physics: Condensed Matter* will help foster further progress in the study of DIET processes. Since the field remains vibrant and exciting, the workshop series will continue with DIET XIII. Professor Richard Palmer (University of Birmingham, UK) will chair DIET XIII in the UK in early summer 2012.

We gratefully acknowledge financial support from SPECS, HIDEN Analytical, BRUKER, The United States National Science Foundation, Georgia Institute of Technology and The State University of New Jersey, Rutgers.