

Report on E Seminar entitled “Using Terahertz Vibrational Spectroscopy to Understand Bulk Material Function”

Speaker – Prof. Michael T. Ruggiero, University of Vermont, USA

Date: June 16, 2020 Time: **18:30 hrs (Indian time) & 09:00 hrs (USA time)**

Organized by: Physics Department, University of Lucknow



The on-going pandemic crisis has created several restrictions on social engagements and communications. But, it is believed that learning and development should remain unhindered, only a new platform is needed. In this respect, Prof. Poonam Tandon, Head, Department of Physics, University of Lucknow organized a webinar on Tuesday 16th June, on the topic “Using Terahertz Vibrational Spectroscopy to understand bulk Material Function”

given by Prof. Michael T. Ruggiero from University of Vermont, USA. More than 100 distinguished scientists and research students across world have participate in this e-Seminar. Prof. Michael T. Ruggiero is a very renowned Scientist who has contributed in the field of Terahertz spectroscopy in a very young age. He has recently joined University of Vermont as faculty in Chemistry. He did his Ph.D. from Syracuse University and later on he worked as EPSRC Postdoctoral Fellow at University of Cambridge. His research work involves a combination of Experimental Terahertz time-domain spectroscopy with Solid State density functional theory simulations to fully understand the fundamental forces that drive the performance of advanced materials, including pharmaceutical solids, organic semiconductors, metal-organic frameworks and biological macromolecules. He has published more than 70 research papers in highly prestigious Journals. **Prof. Ruggiero was recently selected to the 2019 FORBES 30 under 30 Science group**, recognizing his contributions to the field of science and his work in better understanding how the subtle but very specific, motions of atoms influence the properties of materials. He is recipient of “Young Scientist of the Year” award from IRMMW-THz organization for “spreading and expanding the transition of Terahertz spectroscopy from its core community into the chemical sciences. His group also recently received NSF grant.

Prof. Ruggiero in his lecture talked about Terahertz spectroscopy and its application in solid state materials. He explained that how the performance of materials actually depends on its 3-D structure, molecular conformation and how molecular dynamics helps to understand the properties of materials. Prof. Michael highlighted the application of Terahertz spectroscopy for the communication, pharmaceutical characterization, mechanical measurements and many more. Terahertz spectroscopy is one of the most modern new spectroscopic techniques which find applications in many areas including photovoltaic characterization, pharmaceutical testing, security screening, biomedical, astronomy, oil spill characterization, pharmaceutical and quality control. With the exponential growth in research in the terahertz regime, we anticipate more advances in application of terahertz technology in the society. The efforts made by Lucknow University in this situation are highly appreciated. Researchers are extremely benefitted with such lectures given by eminent scientists. .

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दवा परीक्षण में नई तकनीक कारगर

लखनऊ। प्रो. वाइकल टी रिंगर्रो अमेरिका से आए हैं कि टेराहर्ट्ज़ स्पेक्ट्रोस्कोपी सबसे आधुनिक तकनीकों में से एक है, जो छोटी घोलक तन्त्र, वर्णन, दवा परीक्षण, सुरक्षा जांच, नवीन मोडिकल, खनिज विज्ञान, रेल परिवहन तन्त्रण वर्णन, फार्मास्यूटिकल और गुणवत्ता निरीक्षण अदि क्षेत्रों में एप्लिकेशन सुदृढी है। वे लखनऊ विश्वविद्यालय के भौतिकी विभाग द्वारा अंग्रेजों को आयोजित सम्मेलन को करीब 15 मिनट अतिथि सम्बोधित कर रहे थे। 'अल्प वैट्रियल फंक्शन को समझने के लिए टेराहर्ट्ज़ स्पेक्ट्रोस्कोपी का उपयोग विभिन्न सम्मेलन में उन्होंने संवाद, दवा तन्त्रण वर्णन, चिकित्सा जांच और कई और अधिक के लिए टेराहर्ट्ज़ स्पेक्ट्रोस्कोपी के प्रयोग का प्रकाश डाला। सम्मेलन को संयोजक प्रो. पुनम टंडन ने अतिथि का परिचय दिया।

Media Links

<https://theindianviewin.wordpress.com/2020/06/16/प्रतिबंध-में-भी-प्रगति-के/>

<https://www.nayalook.com/restrictions-in-progress/>

<https://indiasamachar24.com/5126/>

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