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The emerging gold-standard Spectro-Fluor™ biotechnology: A step forward fluorescence-free and radioisotope-free innovation

Farid Mena

Fluorotronics USA, Inc., USA

Spectro-Fluor™ also known as Carbon-Fluorine Spectroscopy (CFS™) or Fluoro-Raman Spectroscopy (FRS™) is a relatively new patented platform technology using a family of various methods and cost-effective devices called PLIRFA™ (Pulsed Laser Isochronic Raman and Fluorescence Apparatus). Recently, a number of medical, pharmaceutical and nanotechnological applications have been developed using Spectro-Fluor™. The key feature of this progressive, non-destructive, non-invasive and green technology is based on the discovery of a characteristic optical signature of carbon-fluorine bond(s) in the fingerprint spectral area of 500-900 cm⁻¹ allowing rapid, ultra-specific and sensitive detection, characterization, imaging, and measurement of any fluoroorganics and fluoro-materials including F-polymers. Interestingly, since C-F bond is unique in its character it can be used as a molecular label. Furthermore, the C-F label is efficient, soluble, cheaper, smaller, more stable and less toxic than fluorescent dyes, nanoparticles or quantum dot materials. Thereby, C-F bonds are often incorporated into pharmaceutical, agrochemical and biological molecules in addition to polymers and nano-materials to achieve special properties (e.g. molecular stability, molecular tracing).

Biography

Farid Mena completed his PhD at 28 years from University of Jussieu/Sorbonne and Ministry of Defense (CEA/CEN), Paris, France. He performed postdoctoral studies from Sidney Kimmel Cancer center/Sanford-Burnham Medical Research Institute (CA, USA), Julius-Maximilian Universitaet – School of Medicine of Wuerzburg (Bavaria, Germany) and UNICAMP – School of Medicine (São Paulo, Brazil). He is the director of Fluorotronics USA, Inc., a premier Fluoro-Spectroscopy service organization. He is also the Founder, President and CEO of Consulting, Global Innovation & Trade, Ltd., an emerging Brazilian company which offers a number of green and healthy solutions. He is a renowned inter- and multi-disciplinary Professional.

dr.fmenaa@gmail.com

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