Michelle R Stem, J Laser Opt Photonics 2018, Volume 5
DOI: 10.4172/2469-410X-C7-040

10th International Conference and Exhibition on
LASERS, OPTICS & PHOTONICS
November 26-28, 2018 | Los Angeles, USA

Michelle R Stem

Complete Consulting Services, LLC., USA

Updated advances in micrographic analyses of select photonically responsive natural silicates

This presentation will elucidate on the updates in the advances of the continued micrographic analysis of select naturally occurring silicates. These silicates are made of highly ordered nano-spheres that cause various rare expressions of photonic control. One of the newly discovered control properties is coherent poly-diffraction (CPD), which is also known as coherent poly-propagation (CPP). As was presented during Optics-2018, CPP materials have a unique way of diffracting incident photons after they traveled through or reflected off of an item. The CPP material diffracts incident photons into multiple wavelengths while accurately propagating the shape and colors of the item. CPP occurs under ambient conditions that cannot cause damage to the environment. CPP is the propagation of free-traveling incident photons such that the incident wavelengths and shapes are maintained. This update will present detailed photographic evidence of the CPP property. Potential applications may include solar power, astronomy, microscopy, security and communications issues such as photonic messaging and phase coding with the possibility for error/tamper detection.

Biography

Dr. Michelle R. Stem has a Ph.D. in materials science engineering, MBA in management and B.S. in chemistry. Post-doc research and continued work as Senior Materials Researcher at Complete Consulting Services, LLC. Dr. Stem applies interdisciplinary expertise through multiscale analysis, computational modeling and laboratory synthesis to study extremely rare inorganic, complex and semi-conductor (ICS) materials. Dr. Stem researches ICS structural and property variations to discover and ultimately engineer new methods, applications, models, materials and metamaterials with the goal of controlling photonic, phononic, optoelectronic, band gap and other properties. In addition, Dr. Stem's research develops materials that save energy (e.g. power differentials for photonic band gap versus electronic materials) and finds alternatives to using up rare resources.

MRSTEM@completeconsultingservices.com

Notes: