

Nobel Laureate Eric Betzig Lectures at Academia Sinica on His Latest Microscopic Technique For Live Cell Imaging

Dr. Eric Betzig, one of the 2014 Nobel laureates in Chemistry delivered a plenary talk entitled “Imaging Life at High Spatiotemporal Resolution” at the International Conference on Nanophotonics (ICNP) held by the Research Center for Applied Sciences at Academia Sinica on Mar 22. In the lecture, he introduced his latest microscopic technique for application in live cell imaging. The conference runs from 21-25 March.

Dr. Eric Betzig received the Nobel Prize in Chemistry in 2014 for “the development of super-resolved fluorescence microscopy” along with Stefan Hell and fellow Cornell alumnus William E. Moerner. Dr. Betzig received his Ph.D from Cornell University in 1988. He is currently a Group Leader in research of super-resolution fluorescence microscopy at the Janelia Research Campus in Ashburn, Virginia. Super-resolution microscopy is a form of nano-scale light microscopy that allows powerful imaging of dead cells to observe their bio structure. It represents a huge a breakthrough in bio-imaging.

In the one hour talk, Dr. Betzig introduced his enduring work in super-resolution, as well as with non-diffracting light sheets for the 4D dynamic imaging of living systems and adaptive optics to recover optimal imaging performance deep within aberrating tissues. This technology has brought bio-imaging to a higher level. Dr. Bi-Chang Chen, an Assistant Research Fellow of Research Center for Applied Sciences, Academia Sinica worked with Dr. Betzig in the development of this technology. Their paper entitled “Lattice light sheet microscopy” was published in Science, on October 18, 2014 and later received the 2014-2015 Newcomb Cleveland Prize from the AAAS. In the talk Dr. Betzig also recounted the interesting story of his research experience and his progress in imaging tool development.

The ICNP is a unique event where the latest advances in optics and photonics on both the nano- and micro-scale are reported and discussed. The conference covers several themes, including microscopy and nanoscopy, silicon photonics; quantum optics; metamaterials; plasmonics; transformation optics; materials for micro- and nano-photonics; nanofabrication; and photonic devices, and allows researchers in this field the opportunity to report their work and exchange information with fellow researchers.

The 9th International Conference on Nanophotonics (ICNP 2016) official website: <http://advances.sciencemag.org/content/2/2/e1500875>