

Winners of Youth Innovation Awards of the Faculty of Information Technology, ZJU, 2015

Winner Yang Qing



Prof. Yang Qing from COSE has made original contributions: 1) She pioneered and systematically investigated nanowire based lasers. She put forward a method to achieve broad band wavelength tailoring up to 40 nm on pure CdSe nanowires. 2) She proposed a new mechanism to enhance the performance of micro- and nanowire LEDs by introducing three-phase coupling of mechanics-electronics-photonics. 3) She constructed the physical mechanism of three-phase coupling and pointed out several important and general criteria for distinguishing the piezo-phototronic effects. Recently, Yang demonstrates a fluorescent nanowire ring illumination microscopy, with this method, a feature size as small as 35 nm and various 2D patterns were successfully recorded.

Website: <http://person.zju.edu.cn/qingyang>.

Winner Liu Qingjun

Research team led by Prof. Liu Qingjun from BME focused on biomedical sensing and detecting research area, mainly covering fundamental researches of bio-sensing mechanism and design, engineering realizations of measurement devices, and applications of biosensors. For the fundamental researches, Liu's group employed some methods and materials to explore interaction between cells, proteins and small molecules and then design biosensor for small molecule detection (Published on Chemical Reviews, 2014). For engineering realizations, they developed a portable measuring instrument based on the smart phone mobile terminal which can be used to detect some explosives and biochemical indicators for environmental and biomedical application.



Website: <http://person.zju.edu.cn/biosensor>.

Winner Lin Shisheng



Associate prof. Lin Shisheng from ISEE focused on two research areas: high performance two-dimensional materials heterostructures based solar cells and two-dimensional Si-C system. Through several years' independent research, Dr. Lin achieved records of graphene based heterostructure solar cells (18.5%) and MoS₂ (9.03%) based heterostructure solar cells and two dimensional silicon-carbon system that has become a hot research topic worldwide. Dr. Lin has published more than 60 international peer-reviewed journal papers with over 1000 times citation.

Website: <http://person.zju.edu.cn/shishenglin>.