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Inaugural GSK-SNIC Award in Organic Chemistry 2010

Professor Loh Teck Peng of NTU

Professor Loh Teck Peng is an accomplished and renowned researcher, nationally and internationally. He has been operating in Singapore as an academician (NUS, NTU) since 1994. His research over the last 15 years has been in the area of organic chemistry. Specifically, he made pioneering contributions to new synthetic methodologies, asymmetric catalysis and synthesis, natural products total synthesis, and green chemistry. Among his most influential discoveries are his indium-mediated reactions, the use of ionic liquids as reaction solvents, and the development of chemical reactions in water or under solvent-free conditions, all amounting to significant advances in green chemistry. These discoveries have far-reaching implications not only in process chemistry, but also in medicinal and biological chemistry. Equally important are his discoveries in asymmetric synthesis, where he recognized the phenomenon of enantioselectivity leakage, and developed methods to suppress it, thereby leading to improved enantioselective reactions. He also developed the first asymmetric indium-induced allylation reaction, and designed and synthesized several chiral complexes and organocatalysts for asymmetric synthesis.

Within the area of new synthetic methods, Professor Loh also developed a number of other important reactions, including a practical metal-mediated synthetic reaction in water that may have a major impact in chemical synthesis, and several cascade reactions whose application he demonstrated with a number of elegant total syntheses. In the latter area, Professor Loh made seminal contributions, including the total syntheses of antillatoxin (marine toxin), anisatin (neuroactive agent), methylene nalactacin (antitumor agent), apicularin (antitumor agent), perhydrohistrionicotoxin, siphonarienone and estrone.

Overall, Professor Loh's research accomplishments contributed decisively to the advancement of organic chemistry in general and synthetic organic chemistry in particular, with far-reaching implications in several areas, including pharmaceuticals, biotechnology, and nanotechnology. His accomplishments in chemical synthesis have earned him worldwide renown as documented by his many invitations to speak around the world and his relatively high h-index. He has also contributed significantly to the education and training of young students in organic chemistry and promoted the establishment of the field in Singapore.

We believe that the name of Professor Loh at the top of the list of the GSK-SNIC Award in Organic Chemistry will set the standard, and be most appropriate and quite luminous.

As recommended by the review panel, the SNIC Council herein confers the Inaugural GSK-SNIC Award in Organic Chemistry 2010 to Professor Loh Teck Peng of the Nanyang Technological University.