Prof. Dangyuan LEI

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Dangyuan Lei is Professor of Materials Science & Engineering and Professor of Physics (joint appointment) at the City University of Hong Kong, and was Provost's Visiting Professor at Imperial College London. He received a PhD degree in Physics from Imperial College London in 2011, under the supervision of Professor Stefan Maier (a world-renowned pioneer in Nanophotonics) and in close collaboration with Professor Sir John Pendry (the Father of Metamaterials). His PhD thesis was awarded the prestigious Anne Thorne PhD Thesis Prize. His current research interest centers on the nonlinear, quantum and intelligent nano-photonics and ultrafast spectroscopy of photon-exciton-phonon coupling in two-dimensional semiconductors, with particular interest in the cavity-enhanced light-matter interaction physics and intelligent photonic and optoelectronic nano-devices for sensing, imaging, energy conversion and saving. He has published 282 journal papers, including 3 Nature Energy, 1 Nature Materials, 12 Nature Communications and 3 Science Advances, receiving 18400 citations and an h-index of 76. He has given 2 plenary talks, 14 keynote speeches and 130 invited talks. His work on multiphoton-pumped, ultralow-threshold perovskite lasing was selected as one of the Top 50 Most Read Nature Communications Articles of 2020 in Physics. His co-invention of a smart radiative cooling coating was highlighted as "Editor's Choice" of Science (2020), and its applications in the thermal management of green buildings and skin electronics received two Gold Medals from the International Exhibition of Inventions of Geneva (2022 & 2023). His recent invention of the Plasmonic Printing Technology (PPT) was highlighted in Nature Materials, Nature Synthesis and Light: Science & Applications (by Professor Eric Mazur of Harvard University), and received China's Top 10 Optics Breakthroughs in 2025.