



香港大學

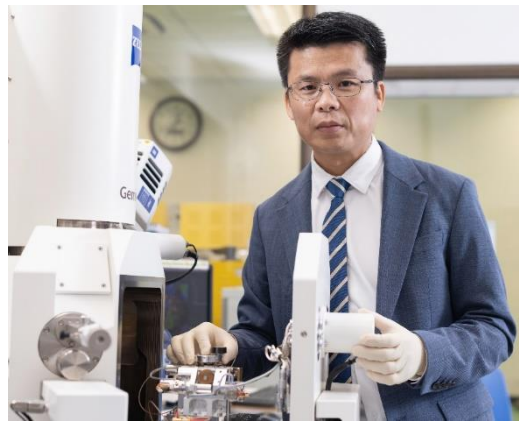
THE UNIVERSITY OF HONG KONG

Professor Mingxin HUANG

**Professor, Department of Mechanical Engineering,
Faculty of Engineering, The University of Hong Kong**

Biography

Professor Huang received his BEng and MSc from Shanghai Jiao Tong University (SJTU) in 2002 and 2004, respectively, and his PhD from Delft University of Technology (TU Delft), the Netherlands in 2008. Professor Huang joined HKU in 2010 as an Assistant Professor, promoted to Associate Professor with tenure in 2016 and Full Professor in 2019. He has been awarded the prestigious Croucher Senior Research Fellowship (2022), Xplorer Prize (2021), Changjiang Scholar Chair Professor (2021), Gold Medal in Geneva International Exhibition of Inventions (2021), HKU Outstanding Young Researcher Award (2018), elected as Member of the Hong Kong Young Academy of Sciences (2019), and Fellow of the Institute of Materials, Minerals & Mining (2020).



Professor Huang's research mainly focuses on the development of high-performance metals. Professor Huang and his team invented the Super Steel. It creates two world-records on strength-ductility and strength-toughness combinations, which were published in *Science* in 2017 and 2020, respectively. Professor Huang is the Editor of *Metal and Materials International*, Associated Editor of *Journal of Materials Science and Technology*, and a member of the editorial boards of five academic journals. Professor Huang has published more than 140 journal papers and is among the top 1% highly cited researchers in his research field by *Web of Science*.

Professor Huang's research mainly focuses on the development of high-performance metals and alloys. He invented the Super Steel material and proposed the concept of "dislocation engineering", as well as obtaining two world-records on achieving strength-ductility and strength-toughness in magnesium alloys. The papers were published in *Science* in 2017 and 2020. With a density about 80 percent lower than steel, magnesium alloys are promising lightweight materials in automotive and aviation industries. Recently, Professor Huang proposed a density functional theory (DFT)-guided machine learning (ML) strategy to discover the substitutes for rare-earth elements in ductile magnesium alloys. With the Croucher Senior Research Fellowship, aiming at reducing our reliance on rare-earth elements, he will develop low-cost, strong and ductile magnesium alloys without the addition of rare-earth elements via the DFT-guided ML strategy and dislocation engineering.