

Nomination of State Natural Science Award 2020 Public Notice

The State Natural Science Award (SNSA) is one of the five categories of award under the State Science and Technology Awards (SSTAs), which aim to reward citizens and organizations that have made outstanding contributions to scientific and technological progress. Organized by the State Council of the People's Republic of China, the SSTAs are the most prestigious awards in the science and technology fields on the Mainland.

The Education Bureau (EDB), with the assistance of the Beijing-Hong Kong Academic Exchange Centre, is responsible for the nominations for SNSA in the Hong Kong Special Administrative Region. In accordance with the requirements of the National Office for Science & Technology Awards, EDB invited the eight University Grants Committee (UGC)-funded universities and the Open University of Hong Kong to nominate suitable research projects through a rigorous internal mechanism to compete for the SNSA 2020. Considering that there is no limit on the number of nominations this year, EDB has decided to nominate all the following fifteen research projects submitted by the universities to compete for the Second Prize of the SNSA 2020:

Project Title	Principal Investigators	Institutions where the project was completed	Organisations where Principal Investigators work	Project Profile and other Relevant Information
Phylogenetics of decapod crustaceans based on nuclear protein-coding genes	CHU Ka Hou TSANG Ling Ming MA Ka Yan	CUHK CUHK CUHK	CUHK CUHK CUHK	<u>Appendix I</u> (Only available in Chinese)
Artificial Intelligence for Medical Image Analysis	HENG Pheng Ann CHEN Hao DOU Qi YU Lequan QIN Jing	CUHK CUHK CUHK CUHK PolyU	CUHK CUHK CUHK CUHK PolyU	<u>Appendix II</u> (Only available in Chinese)
Plasmonic Noble Metal Nanocrystals	WANG Jianfang SUN Ling Dong YAN Chun Hua LIN Hai Qing	CUHK PKU PKU BCSRC	CUHK PKU LZU BCSRC	<u>Appendix III</u> (Only available in Chinese)
Integrative Research on Natural History, Mechanism, Potential Diagnostic and Therapeutic Targets for Non-alcoholic Fatty Liver Disease and its related Hepatocellular Carcinoma	YU Jun Vincent WONG Wai Sun Henry CHAN Lik Yuen ZHANG Xiang Joseph SUNG Jao Yiu	CUHK CUHK CUHK CUHK CUHK	CUHK CUHK CUHK CUHK CUHK	<u>Appendix IV</u> (Only available in Chinese)
State-dependent constitutive framework for unsaturated soils and its applications	Charles NG LEE Chack Fan DAI Fuchu ZHAO Zhonghui ZHOU Chao	HKUST HKU IGSNRR HKUST HKUST	HKUST HKU BJUT STU PolyU	<u>Appendix V</u> (Only available in Chinese)
AI-Theoretical Foundation and Methodology of Transfer Learning	YANG Qiang DAI Wenyuan PAN Jialin SHEN Dou ZHANG Yu	HKUST HKUST HKUST HKUST HKUST	HKUST FP FP BAIDU SUST	<u>Appendix VI</u> (Only available in Chinese)

Project Title	Principal Investigators	Institutions where the project was completed	Organisations where Principal Investigators work	Project Profile and other Relevant Information
Discovery of selective anxiolytics from Chinese herbal medicine and their mechanisms of actions	XUE Hong Michael HUEN S Y Justin LIANG Wai Chung WANG Feng XU Zhi Wen	HKUST HKUST HKUST HKUST HKUST	HKUST HKU UAMS HKFWUMI aTyr	<u>Appendix VII</u> (Only available in Chinese)
Study and Applications of Constitutive Models and Limit Analysis Methods of Geotechnical Materials	YIN Jian Hua ZHU Jun Gao YANG Xiao Li CHEN Jian	PolyU PolyU CSU PolyU	PolyU HHU CSU IRSM	<u>Appendix VIII</u> (Only available in Chinese)
Nature-inspired micro/nanostructures-enhanced droplet transport: Phenomena, mechanisms and applications.	WANG Zuankai LIU Yahua CHEN Xuemei HAO Chonglei LI Jing	CityU CityU CityU CityU CityU	CityU DLUT NUST HITSZ UP	<u>Appendix IX</u> (Only available in Chinese)
Control of Confined Quantum States	ZHANG Ruiqin	CityU	CityU	<u>Appendix X</u> (Only available in Chinese)
Magnetic Resonance Imaging of Brain Structures and Functions	Ed WU Xuekui Edward HUI Sai Kam QI Liqun WU Wutian SO Kwok Fai	HKU HKU PolyU HKU HKU	HKU HKU PolyU JNU HKU, JNU	<u>Appendix XI</u> (Only available in Chinese)
Chemical Reaction Optimization	Victor LI On Kwok Albert LAM Yun Sang	HKU HKU	HKU FLL	<u>Appendix XII</u> (Only available in Chinese)
Membrane-water interfacial phenomenon and its manipulation for advanced membrane technologies in water purification and wastewater treatment	LI Xiao Yan WANG Xiao Mao ZHANG Jian Jun SUN Fei Yun XIAO Feng	HKU THU SMDRIC HITSZ RCEES	HKU THU SMDRIC HITSZ NCEPU	<u>Appendix XIII</u> (Only available in Chinese)
Proterozoic evolution and metallogeny of the western margin of the Yangtze Block, South China	ZHOU Mei Fu ZHAO Jun Hong ZHAO Xin Fu WANG Wei CHEN Wei	HKU CUGWH CUGWH CUGWH HKU	HKU CUGWH CUGWH CUGWH IG	<u>Appendix XIV</u> (Only available in Chinese)
Theranostics agents combating EBV-associated malignancies and understanding of EBNA1 functions in life science	WONG Ka Leung MAK Nai Ki LUNG Hong Lok JIANG Lijun	HKBU HKBU HKBU HKBU	HKBU HKBU HKBU HKBU	<u>Appendix XV</u> (Only available in Chinese)

Abbreviations

CUHK	The Chinese University of Hong Kong
PolyU	The Hong Kong Polytechnic University
PKU	Peking University
LZU	Lanzhou University
BCSRC	Beijing Computational Science Research Center
HKU	The University of Hong Kong
HKUST	The Hong Kong University of Science and Technology
IGSNRR	Institute of Geographic Sciences and Natural Resources Research, CAS
BJUT	Beijing University of Technology
STU	Shantou University
FP	Fourth Paradigm
BAIDU	BAIDU
SUST	Southern University of Science and Technology
UAMS	University of Arkansas for Medical Sciences
HKFWUMI	Hong Kong Federation of Worker Unions' Medical Institute
aTyr	aTyr Pharma Inc.
HHU	Hohai University
CSU	Central South University
IRSM	Institute of Rock and Soil Mechanics, Chinese Academy of Sciences
CityU	City University of Hong Kong
DLUT	Dalian University of Technology
NUST	Nanjing University of Science and Technology
HITSZ	Harbin Institute of Technology, Shenzhen
UP	University of Pennsylvania
JNU	Jinan University, Guangzhou
FLL	Fano Labs Ltd
THU	Tsinghua University
SMDRIC	Shenzhen Municipal Design & Research Institute Co. Ltd
RCEES	Research Center for Eco-Environmental Sciences, Chinese Academy of Science
NCEPU	North China Electric Power University
CUGWH	China University of Geosciences (Wuhan)
IG	Institute of Geochemistry, Chinese Academy of Sciences
HKBU	Hong Kong Baptist University

Any comment or enquiries regarding the above nominations should be addressed to Higher Education Division, Education Bureau **before 14 January 2020** by the following means:

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Education Bureau

The Government of the Hong Kong Special Administrative Region

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