

Funding of Major Program Projects in 2011

Serial Number	Project Title	Applicant
1	Key technologies of astronomical telescopes in extrem site conditions	Yang Ji
2	Exploration for novel unconventional superconducting materials and Research on the corresponding mechanisms	Chen Xianhui
3	Investigations on the multifunctional organic conjugated molecular systems	Zhang Deqing
4	Aptamers for targeted molecular imaging	Wang Kemin
5	The Chemical Formation Processes and Health Effects of the Atmospheric Secondary Pollution	Zhu Tong
6	The study of mechanism and technology of cell polarity switch and migration induced by microenvironment	Duan Shumin
7	Reconstruction of East Asian Blocks in Pangea	Zhao Guochun
8	Water multi-phase exchange in the Third pole earthsystem and its impact	Yao Tandong
9	Theories and methods of engineering hydrology under varying environment	Chen Xi
10	Operation and control theory research of random - deterministic coupling power system with large scale wind power injection	Sun Yuanzhang
11	Theory and Key Technology of Large Scale Wireless Sensor Networks for Carbon Cycle Monitoring	Liu Yunhao
12	Data Modeling and Interactive Virtual Surgery of Digital Human Organs	Zhao Qiping
13	Interaction of bioactive hard tissue biomaterials on host	Zhang Xingdong

Funding of Key Program Projects in 2011

Serial number	Project Title	Applicant
1	Groups and Algebras- - Representations and categorifications	Zhang Jiping
2	High dimension data modeling and analysis	Chen Songxi
3	New Explorations on Markov Processes and Related Areas	Chen Mufa
4	The researches on periodic orbits in Hamilton systems	Long Yiming
5	Nonlinear elliptic and parabolic equations	Chen Hua
6	Mathematical Theory and Methods for Sparse Information Processing	Peng Jigen
7	Analysis and Geometry of Manifolds	Li Jiayu
8	Topology of manifolds	Duan Haibao
9	Optimization in complex networks and its applications in systems biology	Zhang Xiangsun
10	Study on the multiscale dynamics in complex systems	Liu Caishan
11	Wave mechanics analysis & key technology research on the stress measurement and defect detection in complex wire ropes	Wu Bin
12	Key Mechanical Problems on the Failure of High Concrete Dam under Catastrophic Conditions	Ren Qingwen
13	Study on durability of RC members strengthened with FRP in subtropical service environments	Huang Peiyan
14	study on boundary layer of atmospheric environment and in city	Cui Guixiang
15	Research on Dislocation-induced Crystal Plasticity Behaviors at Submicron Scale	Zhuang Zhuo
16	Theory and experiment study of key problems in flexible multibody system dynamics	Hong Jiazhen
17	Research on the two-phase turbulent flow with submicron and nano-particles	Lin Jianzhong
18	Structure formation and the relevant mechanics problems of nanocrystal superlattices	He Linghui
19	A study of the complex flow accompanied with shock wave, turbulence and shear flow	Yang Jiming
20	Mechanism and basic mechanical theory for high-speed machining of metals	Dai Lanhong
21	Research on several essential mechanisms of linear explosive separation	Lu Fangyun
22	Investigation on star formation and X-ray evolution in normal galaxies	Li Xiangdong
23	Research on Astrophysics of Compact Objects	Zhang Shuangnan
24	Numerical simulations of Cosmic structure and Galaxy formation	Gao Liang
25	Studies on nonlinear interaction of convection in planetary interior	Liao Xinhao
26	Black hole accretion and AGNs feedback	Yuan Feng
27	The research on physical structures of central region in AGNs	Bai Jinming
28	Observations and studies of the evolution and outburst phenomena of cataclysmic variables and related objects	Qian Shengbang
29	The Spiral Structure and Kinematics of the Milky Way	Xu Ye
30	Ultrafast pulse deformation and its application to spectroscopy	Gong Qihuang
31	Experimental and theoretical study on exciton and carrier behavior in organic solar cell	Hou Xiaoyuan
32	Study on deep-cooling and precise-manipulating of ytterbium atoms applied for optical atomic clocks	Xu Xinye
33	Regulation of ferroelectric polarization on the electron transport process concerning electroresistance and magnetoresistance	Liu Zhiguo
34	Study on preparation, physical property modulation and quantum process of mixed atomic clusters with peculiar structures and properties	Wan Jian'guo

35	Artificial sonic band-gap materials and ultrasonic devices	Chen Yanfeng
36	Mechanism of novel electroresistance materials	Zhao Yonggang
37	Growth and novel topological surface states of topological insulator thin films and heterostructures	Xue Qikun
38	Study on key Science Problems of MgZnO based deep ultra violet detector	Shen Dezhen
39	Frontier research on strong field physics with mid-infrared lasers	Xu Zhizhan
40	Research on asymmetric borehole acoustics for anisotropic porous formations	Wang Xiuming
41	structure designing and photoelectric property study on oxide heterostructures	Jin Kuijuan
42	Novel phenomena and fundamental mechanism of surface plasmon in micro/nano structures	Xu Hongxing
43	Transportation dynamics in complex networks and its related statistical foundation	Liu Zonghua
44	The nucleon structure study based on highly qualified GeV electron	Hu Bitao
45	TeV Physics and phenomenologies related to collider Experiments	Kuang Yuping
46	Research on physics and key technology in X-band high gradient accelerating structure physics	Chen Huaibi
47	Investigation of key reactions in hydrogen- and helium-burning processes in stars and nuclear properties on the rp-process path of nucleosynthesis	Sun Yang
48	New Methods for High Order Perturbation Calculations in Quantum Field Theories	Luo Minxing
49	Key Physics of the Dynamic Hohlraum Driven by Wire-Array Z-Pinches	Peng Xianjue
50	Time- and spacial-resolved synchrotron radiation studies on the dynamic process in functional materials	Wei Shiqiang
51	Theoretical Study of Some Fundamental Problems at the Frontiers of Neutrino Physics	Xing Zhizhong
52	Surface detector upgrading and study on the γ ray, cosmic ray electron and dark matter particle in 10-100TeV with Tibet AS γ experiment	Hu Hongbo
53	Properties of quark matter and mechanism of QCD phase transition	Peng Guangxiong
54	Laboratory Study on dramatic energy releasing processes in universe	Li Yutong
55	Polyoxometalates based on dye-sensitized Zinc Oxide nanocrystals of solar cells	Su Zhongmin
56	Design and Synthesis of the Bose State of Inorganic Semiconductors	Feng Shouhua
57	Platinum-Based Nucleic Acids Recognition and Modification	Guo Zijian
58	Bimetallic nanocrystals: controllable synthesis and catalytic property study	Li Yadong
59	Controlling the multilevel nanostructures of noble-metal materials for catalysis applications	zheng Nanfeng
60	Preparation and function of cluster compounds	Hong Maochun
61	Organo-di-metallic Reagents: Synthesis and Applications	Xi Zhenfeng
62	Activation and transfer of small molecules promoted by the rare-earth metal complexes	Zhou Xigeng
63	Chemical research on green pesticide targeted on key plant virus	Song Baoan
64	Novel bioactives from stress-tolerant and uncultured microbes	Tan Renxiang
65	Synthesis, structure and supramolecular chemistry of novel and functional macrocyclic molecules	Wang Meixiang
66	Biomimetic synthesis of natural product with important bioactivity	Qin Yong
67	Studies on the functionalization and application of fullerenes	Wang Guanwu
68	Total synthesis of bioactive alkaloids	Ma Dawei
69	Discovery and functional study of the novel molecules with bioactivity from the toxic medicinal plants	Yu Shishan
70	Chemical modulation and application of surface structures of photoelectric functional systems	Wang Yuan
71	The structural and hotspots prediction for WD40-repeat protein superfamily and design	Wu Yundong

	discovery	
72	Isocitrate dehydrogenase kinase/ phosphatase	Jia Zongchao
73	Scientific bases for the rational design of energy and environmental catalysts	Xu Xin
74	Establishment and development of an advanced new generation of polarizable force field - - New method for research and modeling of structures and properties of complex molecular systems	Yang Zhongzhi
75	Theoretical and Experimental Studies for the State-to-State dynamics of Molecular Photodissociation	Xie Daiqian
76	Theoretical Studies on Modification of Optical Functional Properties and Related Radiationless Processes of Photosensitive Organic Molecules and Fluorescent Proteins and Dynamics of their Excited States	Cao Zexing
77	Applicationi of Mass Spectrometer and Photoelectron Spectroscopy in Atmospheric Nucleation	Huang Wei
78	Study on the Chemical Thermodynamics and Intermolecular Interaction of Complex Ionic Liquid Systems	Han Buxing
79	The research of the intrinsic catalytic properties of non-metallic nano-carbon materials	Su Dangsheng
80	Atom-economic reactions directed catalysis chemistry	Xia Chungu
81	Polymer brushes with rigid polymers as side chains: from controlled synthesis to properties	Fan Xinghe
82	Study on methodology in controlling chemical structure of CO ₂ copolymers	Lv Xiaobing
83	Transportation of Microliquids on Light-Controllable Polymer Interfaces	Yu Yanlei
84	Design, Basic Studies and Applications of Novel Bioadhesive Systems	Wei Yan
85	Multi-Valence Metal Complex-Containing Infrared Photonic Polymers: Design, Synthesis and Optoelectronic Properties	Wang Zhiyuan
86	Platic deformation and cavitation mechanism of semicrystalline polymers under tensile stretching	Men Yongfeng
87	Researching on new biosensors and new target-drug systems for the early diagnosis and treatment of ovarian cancer	Yang Ronghua
88	Novel Methods for Highly Sensitive Detection of Biomarkers in Warning and Early Diagnosis of Cancer	Ju Huangxian
89	Sensing of biomolecules on functional material interface	Chen Hongyuan
90	New single-molecule detection methods,hyphenated techniques and their applications to in-vivo single cell ananalysis	Ren Jicun
91	Basic study on glycan structure of glycoprotein	Liang Xinmiao
92	Methodology for Investigations on Interactions Between Regulating Proteins and DNA damaged by Drugs	Wang Fuyi
93	Study on the structure-property relationships of new framework materials and their design	Zhong Chongli
94	Excited state of dye: energy-release regulation and function enhancement by molecular structure innovation	Peng Xiaojun
95	System analysis and optimization of life cycle models of the resource/energy chemical processes	Qian Yu
96	Non-equilibrium Thermodynamics in Interface Mass Transfer process	Lu Xiaohua
97	Achieving a family of HPA salt catalysts involving ILs for liquid-solid heterogeneous organic reaction systems	Wang Jun
98	Construction of micro-scale phase interfaces and preparation of novel functional materials with	Chu Liangyin

	microfluidics	
99	Study on the fundamental key issues in the efficient beneficiation processes of CH ₄ in the Low concentrated coal bed methane	Li Jinping
100	Design of Advanced Materials and Process Optimization for Efficient Separation and Dehydration of Bioethanol	Zhang Baoquan
101	Foundamental research on new technology and mass transfer mechanism of bio-chemical separation process based on the micro-nano interface modulation	Liu Huizhou
102	Aquatic Photochemical Transformation and Photoinduced Toxicity of Antibiotics: Mechanism and Computational Toxicology	Chen Jingwen
103	Biological toxicity effect of nanomaterials and their regulation	Yan Bing
104	Typical Progresses and Controlling Principles of Multitype Contaminants In Soil Environment	Zhu Lizhong
105	Photodegradation of Organic Pollutants	Zhao Jincai
106	Biosynthesis and metabolic regulation of typical type II polyketides	Yang Keqian
107	Structural insights into the molecular mechanism of the Acid Resistance by enteric bacteria	Shi Yigong
108	Small nucleic-acid binding proteins from hyperthermophilic Archaea	Huang Li
109	Genomics analysis on the evolutionary adaptation of the social behaviors of myxobacterial cells to oceanic conditions	Li Yuezhong
110	The mechanism of regulation of actin cytoskeleton on plant cell cytokinesis	Ren Huaiyun
111	Molecular Mechanisms of Receptor Protein Kinase Regulating Early Anther Cell Proliferation and Differentiation in Plants.	Ma Hong
112	The mechanism for the pollen-expressed transcription factor PTF1 family to control pollen tube polar growth and male-female interaction	Ye De
113	Influence of atmospheric nitrogen deposition on the ecosystem ¹⁵ N natural abundance and N cycling along a transect of Inner Mongolia grassland	Li Linghao
114	Stable isotope tracing study of the responses of key soil carbon and nitrogen processes of typical forests to available nitrogen in China	Li Shenggong
115	Coupling C and N cycling in the river-reservoir-watershed ecosystem	Zhang Quanfa
116	Impacts of changes in precipitation seasonal distribution on soil ecological processes of subtropical evergreen broadleaved forests	Shen Weijun
117	Molecular Basis of Tree Improvement for Fiber Production	Li Laigeng
118	Mechanisms on soil organic matter maintenance in secondary broadleaved forests naturally regenerated with artificial promotion measures	Yang Yusheng
119	Regulation of oxidative stress and programmed cell death by S-nitrosylation of proteins in Arabidopsis	Zuo Jianru
120	Phosphorylation of the microtubule-associated protein EB1: regulation and functions	Zhou Jun
121	The mechanism underlying glucose transportation regulated by a multiple protein complex based on Axin/TNKS/Kif3a	Lin Shengcai
122	Functional characterization of protein phosphatases in DNA double-strand break repair	Xu Xingzhi
123	Structural biology study of the important functional protein complexes related to DNA-damage repair	Teng Maikun
124	Regulation of the differentiation and activation of mononuclear-phagocyte lineage	Han Hua
125	Regulatory mechanisms of ubiquitination and sumoylation of IRF3 and their roles in antiviral innate immunity	Shu Hongbing

126	Research on biomimetic preparation of Osteochodral composite tissues repair materials and its regeneration mechanism	Yang Liu
127	Mechanism and before clinical research on Activated Endogenous neural stem cells repairing spinal cord injury by an Biomaterial scaffold	Li Xiaoguang
128	Molecular mechanisms underlying targeting fidelity of neuronal circuits	Ding Mei
129	Interaction between Olfactory Ensheathing Cells and Olfactory Receptor Neurons and the underlying mechanisms	He Cheng
130	Practice makes perfect: The neural mechanisms of practice effect and its application	Xue Gui
131	The involvement of BDNF in memory formation and extinction on the basis of neural circuitry	Chen Zheyu
132	Neural and genetic regulation of individual and collective decision-making in Drosophila	Guo Aike
133	Regulation mechanism of metabotropic γ -aminobutyric acid receptor in aging	Liu Jianfeng
134	Inhibitory Effect of Dopamine Receptor on α/β 1 and AT1 Receptor in Hypertension	Zeng Chunyu
135	Regulatory role of novel endogenous sulfur-containing small molecules sulfur dioxide and cystathionine in the cardiovascular system	Du Junbao
136	The Effects and Mechanism of CYP Epoxygenase and Its Metabolites EETs on Cardiac Hypertrophy and Myocardial Injury	Wang Daowen
137	Genetic and molecular mechanisms of hybrid sterility and wide compatibility regulated by the S5 system in rice	Zhang Qifa
138	Epigenetic Inheritance of Plant Centromeres	Han Fangpu
139	Study of molecular regulating network of adipogenesis with systems biology approaches	Wu Jiarui
140	Study on the new mechanism by which IKK can inhibit the TNF α -induced cell apoptosis	Lin Anning
141	The molecular mechanisms of translation control in germline development	Chen Dahua
142	Mechanistic study of cardiac proidium formation and development	Yang Zhongzhou
143	Molecular genetics of liver primordium	Luo Lingfei
144	Molecular Basis of Synergistic Improvements of Cotton Fiber and Seed	Pei Yan
145	the molecular mechanism of recessive male sterility and its utilization in Brassica napus	Tu Jinxing
146	Study on structural elucidation of polysaccharides from food materials and the mechanism of their biological activities	Xie Mingyong
147	Mechanism of change in starch and protein and other major food components in health food manufacturing	Li Lin
148	Mechanisms of nitrogen catabolite repression during food fermentation and its regulation	Chen Jian
149	The disaster-causing mechanism and new strategy for control of white-backed planthopper transmitted-Southern rice black streaked dwarf virus	Wei Taiyun
150	Study on development mode and molecular mechanisms for insecticide resistance in major insect pests of rice	Han Zhaojun
151	Inheritance and Regulation Mechanism of the Short Juvenility in a Precocious Mutant of Trifoliolate Orange among Citrus Resources	Hu Chun'gen
152	Evaluation, identification and exploitation of drought-cold resistant for vitis germplasm	Li Shaohua
153	Transcriptional and post-transcriptional regulation of flower opening quality by ethylene in roses	Gao Junping
154	The evolution and molecular adaptation of Tibetan fishes	Chen Liangbiao
155	Sex pheromone coding in two Helicoverpa species and its genetic basis	Wang Chenzhu
156	Functional research of key genes in brain evolution of primates	Su Bing

157	Interaction of CSFV and host protein and molecular mechanism of modulation of CSFV replication and assembly	Tu Changchun
158	Study on lead structures and their targets of anti-hemolysins of pathogenic bacteria	Deng Xuming
159	QTL mapping and gene function dissection for important economic traits in scallop	Bao Zhenmin
160	Study of anti-hemorrhage related genes in grass carp	Wang Yaping
161	Functional and mechanism analysis of shrimp antiviral related genes	Wang Jinxing
162	Screening and functional analysis of sex determining gene(s) and sex determination mechanism in half-smooth tongue sole	Chen Songlin
163	The molecular mechanism of baculovirus per os infection.	Hu Zhihong
164	Regulatory Mechanisms of Nuclear-encoded Chloroplast Protein Translocation	Zhang Lixin
165	Functional mechanisms of phosphatidylinositol signaling pathway on plant growth and development	Xue Hongwei
166	Steady mechanism of social system in Golden snub-nosed monkey (<i>Rhinopithecus roxellana</i>)	Li Baoguo
167	Regulatory mechanism of AMP-activated protein kinase (AMPK)	Wu Jiawei
168	Structural study for leucine-rich repeat receptor-like protein kinases and relative signal pathway	Chai Jijie
169	The role of tRNA on quality control in protein biosynthesis and the novel function of tRNA	Wang Enduo
170	Study on the molecular mechanisms of large dense-core vesicles exocytosis	Xu Tao
171	the novel mechanisms of pain	Zhang Xu
172	mechanisms and functions of mitochondrial superoxide flash	Cheng Hepin
173	Studies on the genetic and physiological mechanism of DNA sulfur modification-restriction system	Deng Zixin
174	Canalization of transcriptome in relation to the function and evolution of microRNAs in <i>Drosophila</i>	Chung-I Wu
175	DEP1 controls shoot stem cell niche and grain yield in rice	Fu Xiangdong
176	The molecular genetic basis of hybrid reproductive isolation in rice	Lin Hongxuan
177	Characteristics of a novel phage and its endolysin, and biological structures of the lysin and its target on cell wall peptidoglycan	Han Wenyu
178	Paleo-temperature, paleo-precipitation and paleo-vegetation of the Holocene Megathermal in the climate-sensitive zone of northern China	Xiao Jule
179	Climatic and Environmental Changes in Arid NW China during the Last Glacial/Interglacial: Model and Mechanism	Chen Fahu
180	The interannual-interdecadal winter-spring climate variability and predictability for Northeast China	Wang Huijun
181	Radiation Effect of the Atmospheric Brown Clouds	Shi Guangyu
182	Towards the Understanding of the Transient Climate Evolution of the Last 21000 Years	Liu Zhengyu
183	Interacion and environmental effect of iron oxides and sulphate minerals with anaerobic bacteria	Chen Tianhu
184	The temporal and spatial distribution of geomicrobial functional group in cave systems in west Hubei province and the implication in palaeoenvironment	Wang Hongmei
185	Processes and mechanisms of adaptation to the extreme environments of intertidal zone by mangroves	Shi Suhua
186	The study of the Ediacaran Lantian Biota	Yuan Xunlai
187	Character and sequence of monsoonal events recorded in stalagmites from South China and	Wang Yongjin

	their forcing mechanisms during the late Quaternary	
188	Fine seismic structures of the Earth's inner core surface and their temporal change	Wen Lianxing
189	Late Cenozoic conjugate strike-slip faults in SE Tibetan plateau	Wang Erqi
190	Petrogenesis of leucogranite and channell flow in southern Tibet	Wu Fuyuan
191	Testing the hypothesis "Continental collisions are primary sites of net continental crustal growth"	Niu Yaoling
192	A study on the accretional and reworking processes of the lower crust beneath the North China block	Zheng Jianpin
193	Seismic Array for Deep Subducting Dynamics beneath Northeast China	Chen Qifu
194	Nuclear Magnetic Resonance Logging New Theory and technique of Complex Hydrocarbon Reservoir	Xiao Lizhi
195	Fundamental Problems in Seismic Imaging of Complex Structures	Fu Liyun
196	Coal Mine Dsaster Events and Seismic Channel Waves Field Characteristic Demonstration Research-the Prospecting of Fault and Void in Changing Thickness Based on In-Seam Waves	Teng Jiwen
197	Marine controlled-source electromagnetic method for offshore hydrocarbon exploration	Li Yuguo
198	Characterization of Non-Stationary and Nonlinear Random Noise in Seismic data and Attenuation Cuntermeasure with Time-Space TFPF	Li Yue
199	Evolution of paleostructure and paleogeography during Paleozoic deformations and its constrain on the petroleum accumulation in the Tarim basin	Lin Changsong
200	The Cenozoic Ailaoshan-Jinshajiang Cu-Au metallogenesis associated with alkaline magma in continental tectonic setting	Bi Xianwu
201	Renewal processes of organic nitrogen fractions in arable soil and driven factors	Zhang Xudong
202	Modeling and Influencing Mechanism of Urban LUCC on PAHs Muti-media Cycle Process	Liu Min
203	Material Flux Modeling of Agricultural Landuse Systems at Several Intensive Farming Areas in China and the Assessment and Control of Environmental Risks	Liu Liming
204	Mechanisms and Controlling Facotrs of Methane Oxidation in Rice Field Soils	Lu Yahai
205	assessment of representation errors of satellite remote sensing retrieved CO2 and modeling of CO2 in lower atmosphere	Chen Liangfu
206	Responses of typical land surface processes to environmental changes and their comparisons of southeastern and southern Tibetan Plateau	Zhu Liping
207	Predictive mapping of key soil properties over Heihe Watershed	Zhang Ganlin
208	Watershed Land Surface Processes and Human Activity Adaptation	Taxifulati Teyibai
209	Natural nanoparticles in Chinese zonal soils: Its characterization and influence mechanism on the interface behavior of typical organic pollutants	Xu Jianming
210	A Study of the Mars-like Aeolian Geomorphology in Deserts of the Qinghai-Tibetan Plateau and Its Surrounding Areas	Dong Zhibao
211	Coupling mechanisms between ecosystem services and regional social well-being: Perspective of geographical integration analysis	Li Shuangcheng
212	Simulation on the environmental processes of mercury in the earth surface of North China	Wang Xuejun
213	Weathering of minerals, mineral nutrient transport and transformation in the granite regolith under climatic control: integrated studies mainly by using Sr, Li, B and Si isotopes	Liu Congqiang
214	Study on the impacting mechanism of aquifer structure deformation on regional water circulation under the drive of group coal mining	Zhang Fawang

215	Observation and simulation on water balance of typical mountain areas in arid regions	Ding Yongjian
216	study on novel rainfall runoff hydrological modeling in flood forecasting of semi-humid and semi-arid catchment	Li Zhijia
217	Ecohydrological processes and water budget in the Qinghai Lake watershed	Li Xiaoyan
218	Watershed simulation of runoff generation by rainfall, snow, and glacier melt in arid region of Northwest China	Luo Yi
219	Study on Deformation Mechanism and Analytical Method of Large Deformation in Soft Roadway with High Ground Stress	Liu Quansheng
220	Interaction Mechanism of Natural Organic Matter in Lake Eutrophication: The Sources and Processes	Wu Fengchang
221	Three-dimensional Deformation and The Evolving Mechanism of Land Subsidence in Beijing	Gong Huili
222	Study on the time-dependent deformation mechanism and stability of high slope under high geostress and large-scale excavation	Huang Runqiu
223	Study on intimate size interaction between inhalable mineral granules and common bacteria	Dong Faqin
224	Globalizing cities in Post-reform China: Process, Pattern, Dynamics and Space	Xue Desheng
225	The Impact of Rural-Urban Development Transformation on Resources and Environment and its Optimal Controlling : Case study of the area around Bohai Rim in China	Liu Yansui
226	Monitoring of N transformations in Chinese typical arable soils using technique of infrared photoacoustic spectroscopy	Du Changwen
227	A Study of Spatial Organization Mechanisms and Optimization Models for Integration in the Yangtze River Delta Region	Chen Wen
228	Methods and Applications in 3D High-precision Modeling of Tunnel Surrounding Rock Stability	Zhu Hehua
229	Studies on the geochemical process and human exposure levels of transformation product of higher brominated diphenyl ether	Fu Jiamo
230	Study on the feedback mechanism and hazard forecast of man-induced loess landslide	Peng Jianbing
231	Distribution, origin and health effect of polycyclic aromatic hydrocarbons in air and soil of China	Tao Shu
232	contribution of photosynthetic Picoplankton to biological pump in the South China Sea and ecological mediation	Huang Liangmin
233	Influences of the Three Gorges Dam on sediment dynamic processes and geomorphological evolution in the Yangtze estuary and delta area	Yang Shilun
234	Comparison study of process mechanism of nitrification and denitrification between Pearl River estuary and northern South China Sea	Dai Minhan
235	Chemical defensive substances and their chemoeological effects of marine medicinal organisms from the coral reef ecosystem	Wang Changyun
236	Study of Mechanisms and predictability of Pacific Decadal Oscillation	Wu Lixin
237	The effects of Tibetan Plateau on water cycle and rainfall anomaly changes in Meiyu area	Xu Xiangde
238	The study of water and heat cycle and its effects on local climate at the typical ground surface in the source region of Yellow River	Lu Shihua
239	Mechanism of the East Pacific Stationary Wave train and its variability and impact on Atmospheric Circulations and Climate in the Northern Hemisphere for the Boreal Winter	Tan Benkui
240	Concurrent variation between subtropical and temperate jets over east Asia and its association with the climate anomaly in China	Zhang Yaocun

241	Dynamics of Tropical Cyclone Intensity and its Change	Tan Zhemin
242	Dynamics of Coronal Mass Ejections at Early Phase	Wang Yuming
243	Dynamical Coupling in the Ionosphere-atmosphere System	Wan Weixing
244	Combined recovery methods and simulation of multi-generation satellite gravimetry	Xu Houze
245	Key factors of soil corrosion and mechanism of high strength pipeline steels	Li Xiaogang
246	Cluster structure and properties of complex alloy phases	Dong Chuang
247	Alloy Phase, Phase Transition and Associated Properties Studied by Computation and Simulation of the Ternary Metal Systems	Liu Baixin
248	Biomimetic Fabrication of Metal Matrix Composites and Properties	Zhang Di
249	Electrochemical fundamental research on atmospheric corrosion of materials under thin electrolyte layer	Zhang Jianqin
250	Fabrication of aluminum-based bulk metallic glass materials	Wang Jianqiang
251	Study on the Environmental Factors of Metal Corrosion and the Mechanism of Rusting Evolution in Typical Atmosphere	Wang Zhen'ao
252	Formation and degradation mechanism of corrosion product films of typical metallic materials in aqueous solutions	Zheng Yugui
253	Precipitation, Strengthening and Toughening Mechanisms in Age Hardenable Alloys	Nie Jianfeng
254	Multi-field coupling characteristics in ferroelectric functional composite materials and basic research for novel device applications	Dong Shuxiang
255	Basic Science of Microwave Response and Electromagnetic Properties at High-temperature towards Low-dimensional Radar Absorbing Materials	Cao Maosheng
256	investigations on low loss LTCC materials used in whole frequency range	Zhang Huaiwu
257	Mechanisms and applications of fs laser induced functional microstructures in transparent matrices	Qiu Jianrong
258	Research on Growth of Large Size Nonlinear Optical Crystals	Shen Dezhong
259	carbon/silicon quantum dots: controllable synthesis, PL properties tuning, and imaging guided therapy for cancer	Kang Zhenhui
260	Study of the building of nanostructures, their functionalization, and the interface interaction at the atomic and molecular level	Hou Jianguo
261	Basic Research on the Growth, Properties, and application of new-type UV and DUV nonlinear optical crystals	Wu Yicheng
262	Structural control of novel inorganic nano drug-carriers and study on the controllable release and targeted performance of anti-cancer drugs	Shi Jianlin
263	Effect of external and internal sulfates on hydration and hardening of Portland cement	Qian Jueshi
264	Preparation and Self-assembly of Polymer/Inorganic nanoparticles Composite Colloidal Spheres	Wu Limin
265	Cold flow behavior of polymer chain and its application in industry	Xue Qi
266	Formation and Modulation of Nanostructures in Thermosets and Properties of Nanostructured Polymers	Zheng Sixun
267	Study on the Polypeptide Dendrimers Based Drug Delivery Systems with Integrated Functions	Gu Zhongwei
268	Degradation induced failure of polymer materials at complexed conditions and the new stability approach	Li Guangxian
269	Elimination of organic pollutants using environmental catalytic fibers driven by multi-field	Chen Wenxing

270	Weak epitaxy growth of organic semiconductor crystalline films	Yan Donghang
271	Syntheses and properties of novel microporous organic polymer membranes	Zhang Suobo
272	The studies on ageing and degradation behaviors and new antiageing of organic polymer materials	Yang Mingshu
273	Study on stability of rock mass around subsea tunnel and its control mechanism	Zhang Dingli
274	Fundamental Research in Efficient Utilization of High Phosphorus Oolitic Hematite by Reduction	Han Yuexin
275	Basic study on preparation and control of microstructure of metal fiber porous materials	Xi Zhengping
276	Theory Basis Study on Gas Drilling	Liu Qingyou
277	Heat hazard control and heat energy utilization of deep mining	He Manchao
278	Study on fundamental scientific issues in flow assurance of deepwater flow lines transporting waxy/viscous crudes and natural gas	Zhang Jinjun
279	New application of structural analysis method on hydrometallurgical physical chemistry	Chen Qiyuan
280	Investigation on Turbomachinery Complex Mechanic System Dynamic and Sound and Vibration Controlling	Gao Jinji
281	New Principle of Controlled Nano-polishing Technology for Large Scale KDP Crystal Optical Element	Guo Dongming
282	Robust design theory for mechanical key parts based on dynamic and gradual reliability	Zhang Yimin
283	Fundamental Research on Low Carbon Manufactory of Top-grade Metal-forming Equipments	Liu Zhifeng
284	A Novel Principle and Method of Free-form Surface Texture Fabrication based on Laser Projective Ablation by Galvanometer Scanning	Zeng Xiaoyan
285	New principle of integrated manufacturing and realization of new process for blade free-form surfaces	Zhao Ji
286	Theory and Key Technology on a New Short Precision Cast-rolling Forming Technology of Ring Parts	Li Yongtang
287	Innovation and Integrated Design of Lower Mobility Parallel Manipulators	Huang Tian
288	Research on rotary positioner of large stroke and sub-microradian scale accuracy with hybrid actuator and transmission	Fan Dapeng
289	Theoretical and experimental studies on the energy and mass durability of heat	Guo Zengyuan
290	Study on engineering thermal physical problems in indoor SVOC control	Zhang Yinping
291	Research on Mechanism, Modeling and Control of Internal Flow for Compressor	Yuan Xin
292	Studies of multi-scale and trans-scale problems in energy and environment discipline	Tao Wenquan
293	Study on Ignition, laminar flame propagation and chemical kinetics of typical fuels	Huang Zuohua
294	Investigation of flow characteristics and multi-field multi-scale coupling interaction mechanisms in gas-solid two-phase turbulent boundary layers	Fan Jianren
295	Interfacial phenomena and transport enhancement in multiphase photobiochemical conversion processes	Liao Qiang
296	Key Basic Problem of stator permanent magnet wind power generator	Cheng Ming
297	The Hybrid Offshore-sustainable Energy generation system	Ju Ping
298	Theory and method of State awareness and vulnerability assessment for smart grid	Cao Yijia
299	Research on Magneto-acoustic tomography based on lorentz source	Liu Guoqiang
300	Fundamental Research on Key Technologies of High Capacity Efficient Integrated Flywheel Energy Storage	Wang Dong

301	Research on reliability of power converter in renewable energy generation	Zhou Luowei
302	Study of function failure mechanism and aseismic safety evaluation of nuclear safety-related engineering structures under seismic load	Kong Xianjing
303	On the theories and methods of adaptive preservation and reuse of urban architecture heritages in China	Wang Jianguo
304	Urban Road Network Active Traffic Management and Control Theory based on Multiple Detection Data	Wang Yin Hai
305	Studies on the Sustainability-based Decision-making and Design of Large-Scale Public Building	Sun Yimin
306	Thermodynamic analysis on building thermal built environment	Jiang Yi
307	Water quality degradation mechanism and control principle of reclaimed water during surface storage	Hu Hongying
308	Research on high-performance steel-concrete composite bridge systems	Nie Jianguo
309	New technology and mechanism of UF membrane on drinking water based on process controlling	Qu Jiuhui
310	Novel process and theory for urban wastewater advanced treatment based on highly effective separation and reclamation of pollutants	Liu Junxin
311	Theories and methods on long-term service behavior of huge hydraulic structure	Gu Chongshi
312	Hydrological processes in the desertified region and of its effect on the ecosystem	Liu Tingxi
313	Water environmental of coast and estuary by nuclear power plant	Fang Hongwei
314	Study on Quantitative Identification Method of Water and Mud Inrush Hazard Source Advanced Detection and Hazard Catastrophe Mechanism and Its Control Method in Hydraulic Tunnel	Li Shucai
315	Study on coupling dynamical theory for interaction of propulsion system and hull of large ships	Yan Xinping
316	Effects and mechanisms of ground cover rice production system (GCRPS) for saving water, preventing nitrogen pollution and reducing emissions of greenhouse gases	Zuo Qiang
317	Pressure fluctuation and flow-induced vibration of large-scale centrifugal pump system	Wang Fujun
318	Basic theory and critical technologies of dual logic based low power IP core design	Xia Yinshui
319	Research on metamaterials with active and micro-nano-scaled lumped elements	Ran Lixin
320	Retrieving temporal information of neuroimages and its applications in the CNS drug efficacy testing	Liu Yijun
321	integrated gas sensor using hierarchical composite nanostructures on silicon substrate	Tang Zhen'an
322	Principles and Technologies for high-speed and broadband terahertz modulation	Wen Qiye
323	Modulation of terahertz quantum cascade laser and real-time video transmission	Cao Juncheng
324	Research of Active and Intelligence Service for Mobile Networks	Chen Junliang
325	Collaborative coding and modulation theory and methodology of high data rate transmission in space network	Ge Ning
326	Wireless Channel Modeling and Application Used in Underground Railway transportation	Tan Zhenhui
327	Research On Theory and Key Technologies Of OFDM-PON	Wang Min
328	Basic Research on Remote Sensing Technology of Oceanic Dynamics with Shipborne High Frequency Surface Wave Radar	Xie Junhao
329	SAR data integrated process and environmental parameters inversion	Guo Huadong
330	Vison-based Tracking and Locating Ground Targets from an Unmanned Aerial Vehicle	Zhang Li

331	Research on Basic Theories and Key Technologies of SAR Imaging and Information Acquisition in near space	Song Jianshe
332	Research on Ontology-based Hybrid Machine Translation of Minority Language and Chinese	Huang Heyan
333	The foundational theory and key technology for open software system	Duan Zhenhua
334	Theory and Technique of Data Quality Management	Fan Wenfei
335	Facing public security multi-source isomeric data fusion for colony action analyzing and mining	Yao Hongxun
336	A Holistic Approach for Improving Programming Efficiency of Many-core Processors	Qian Depei
337	the research on high-efficiency scheduling theory and method for large-scale heterogeneous parallel system	Li Kenli
338	Theory and Technology of Mega Data Centers on Energy Efficiency and Scalability	Chen Guihai
339	Theory and Key techniques for verification of on-chip multi-core processors	Guo Yang
340	research of video coding,transmission and intelligent processing adapting to cloud computing environment	Huang Hua
341	Modeling of Complex Scenario and Super-High Resolution Rendering	Ma Lizhuang
342	The Study of Prediction Methods of Protein-Protein Interaction and Protein Function Based on Machine Learning	Huang Deshuang
343	The Research of Fundamental Theories and Applications for Complex Spatio-temporal Knowledge Intelligent Processing	Liu Dayou
344	Text-level Chinese Semantic Parsing	Liu Ting
345	Design and Cryptanalysis of New Cryptographic Algorithms	Wang Xiaoyun
346	On Foundations of Data Security in Cloud Computing	Chen Kefei
347	Research on Post-IP network architecture and the key mechanisms	XIE Gaogang
348	Cross-Scale Perceptual Computing Theory and Key Technology for Mobile Social Network	Qin Zhiguang
349	Research on the Key and Fundamental Issues on Active Safety Control of High Speed Trains	Song Yongduan
350	Evaluation of in-service safety and performance of high-speed trains: investigation on key problems based on monitoring data	Jin Weidong
351	Study on intelligent sensing and comprehensive monitoring of high-speed railway status	Yu Zujun
352	Tactical Aircraft Flight Dynamics and Control laws for Vertical or Short Distance Take-off/Landing	Shi Zhongke
353	Modeling and control of motion reconstruction of space cooperative vehicles	Jia Yingmin
354	machine vision based froth flotation process modeling and optimization control	Gui Weihua
355	Real-time Performance Monitoring, Assessment and Optimization for Multi-Layer Process Control System	Su Hongye
356	Control Theory of Quantum System and Its Experimental Verification	Xi Zairong
357	Dynamic Evolutionary Modelling and Collaborative Control of Carbon Fiber Manufacturing Process	Ding Yongsheng
358	Development of high performance gas sensors for exhaust gases of gasoline/diesel automobile and H ₂ of fuel cell automobile	Lu Geyu
359	In situ fast detection method and implementation technique of nitrogen content in farmland soil	Zhao Chunjiang
360	Information dynamic storage and acquisition theory and technology based on the memories resistance	Shen Yi
361	Dynamics and Regulatory Mechanisms in Biomolecular Networks for Type 2 Diabets	Chen Luonan

362	HF OTHR Information Processing and Fusion Based on Joint Decision and Estimation	Pan Quan
363	Visual Computing in Non-Euclidean Space	Tan Tieniu
364	Computational Modeling of Speech Production and Its Application on Speech Rehabilitation	Wang Lan
365	Study of Mechanism of Peripheral Nerve Function Regeneration and Neural Signal Decoding	Li Guanglin
366	Research on key technologies of growing AlN single crystals	Zheng Ruisheng
367	The research on next generation graphics processing SoC and key technologies	Han Jungang
368	The Development of Electrically Pumped Organic Lasers	Huang Wei
369	Research on the Key Scientific Problems of Amorphous Oxide Thin Film Transistors	Xie Hanping
370	Study of graphene field effect transistor and its integrated technology	Jin Zhi
371	The fundamental study of wireless,passive integrated sensors	Huang Qing'an
372	Research on the femtosecond laser hyperfine machining of refraction/diffraction hybrid optical elements	Chen Qidai
373	Fundamental research on super-resolution nano optical data storage	Wu Yiqun
374	The study of a microstructured semiconductor laser with high performance	Zheng Wanhua
375	Basic research of high-speed laser optoelectronic components based on novel electro-optical ceramics	Qu Ronghui
376	Investigations of key technologies for high-sensitivity surface plasmon resonance fiber optic biological and chemical sensors	Peng Wei
377	Fundamental theories and key technologies of three-dimension cloakings at terahertz frequencies	Zhang Weili
378	Maskless and parallel nano scribe technology base on surface plasmon	Luo Xian'gang
379	Fundamental studies of cylindrical vector beams and their novel applications	Yuan Xiaocong
380	Research on high power short wavelength and narrow linewidth all-solid-state laser	Yang Feng
381	Investigation on high peak power and high energy hecto-picosecond laser pulse technology based on stimulated Brillouin scattering	Lu Zhiwei
382	Research on high average power ultrafast 2-mircon lasers	Xu Jianqiu
383	Study on the fundamental theories and key technologies in laser generation and combining of high power fiber lasers	Zhao Wei
384	Building Chinese Survey Data Archive	Yuan Wei
385	China Health and Retirement Longitudinal Study	Zhao Yaohui
386	Datasets on China's Household Income Projects	Li Shi
387	Operational Management with Modeling of Integrated Regional Transport System	Mao Baohua
388	Reseach on muti-source information service system in cloud computing	Yang Shanlin
389	Research on Innovative Modes and Methods of Supply Chain Management in China	Zhou Yongwu
390	Theories and Methods of Optimal Managementand Control in Compact Warehousing Systems	Xu Xianhao
391	Scheduling and Optimization of resources in clinical services	Xie Xiaolan
392	Research on Resources schedulling and Optimization in Healthcare Service	Shi YingKang
393	Modeling, Asset Pricing, and Risk Management in Complex Evolutionary Financial Systems: An Agent-based Computational Approach	Zhang Wei
394	Panel Data Modelling: Theory and Approaches	Cai Zongwu
395	Resarch on governance and evaluation of Chinese transnational business groups	Lin Runhui
396	Research on China's outward FDI and cross-border M&A strategy	Wu Changqi
397	New Generation Employees and Human Resource Diversity Management: Inclusion Based	Tang Ningyu

	Multi-level Study	
398	A Research on Accounting Information and the efficiency of Resource Allocation	Lu Zhengfei
399	Customer Relationship and Marketing Channel Management based on the new generation of interactive technologies in Internet Environment	Zhuang Guijun
400	Research on R&D network, technological capability evolution and their interaction	Li Huan
401	Evolution Pattern of firm technological innovation capability in the context of economic structure transition, R&D networking	Wei Jiang
402	Study on logistics resource integration and schudeling	Xu Shoubo
403	Study on The Improvement and Management of Rural Financial System in China	Li Rui
404	The research toward Theories and Major Problem on Chinese Education Resource Allocation	Zhong Binlin
405	The Choice of Path and Management of China's Urbanization in the New Stage	Li Shantong
406	China's Urbanization under Inclusive Growth: Mechanism, Roadmap and Policy Adjustment	Wan Guanghua
407	Theoretical and empirical study on petroleum security management towards global resources	Fan Ying
408	Study on Policy and Management of Chinese Information Resource Industry	Feng Huiling
409	Research on the Economic Security and Countermeasure for the Natural Gas Resource	Zhang Zongyi
410	The molecular mechanisms of HDAC2 and inflammasomes in regulation of Th17 in chronic aiwray diseases	Shen Huahao
411	The Mechanism of Vascualr Endothelial Activation by Flow Shear Stress	Zhu yi
412	Identification of signaling pathways in early response and triggering endogenous protective machinary against vascular injury	Tian Xiaoli
413	Study of mirRNA let-7f/mir-27b on angiogenesis and wound healing in diabetes	Chen Fengyuan
414	The role and mechanism of microRNA in vascular injury and repair	Jing Qing
415	Role of transient receptor potential vanilloid 1 (TRPV1) cation channel in the early pathogenesis and lesion repairing of atherosclerosis	Zhu Zhiming
416	role of LPDCs in medianting the injury of immune barrier in intestine after traumatic shock	Liang Tingbo
417	The regulation and signal transduction of the interaction between platelet glycoprotein Ib-IX and von Willarbrand factor	Dai Kesheng
418	Molecular basis of the fetal-maternal cross-talk microenvironment determining the term pregnancy outcome	Wang Haibin
419	Role of Angiotensin II mediated tubulo-glomerular feedback loop in proteinuria induced tubulointerstitial inflammation and fibrosis.	Liu Bicheng
420	Wnt/ β -catenin signaling in renal fibrogenesis: role and the underlying mechanism	Liu Youhua
421	The new mechanism of chronic progressive renal fibrosis:the role of microRNA	Yu Xueqing
422	The effect of FoxO1 regulated target genes in in pancreatic beta cell dysfuction in diabetes	Han Xiao
423	Sumoylation Regulation of Beta Cell Apoptosis and Functional Impairment in the Pathogenesis of Type 1 Diabetes	Wang Congyi
424	Grb10 and mTOR signaling: Function and Regulation in Pancreatic beta Cells	Liu Feng
425	MicroRNA and related signaling pathways regulate proliferation and function of pancreatic beta-cells	Wang Weiqing
426	Study on the molecular mechanism of neurons synaptic remodeling during retinal degeneration	Yin Zhengqin
427	Mechanisms and signal transduction pathways in preventing proliferation and epithelial-mesenchymal transition of lens epithelial cells by fabricating new drug delivery systems on intraocular lens surfaces	Yao Ke

428	Study on the pathogenesis and management strategy of uveitis through modulating DC by AhR, VitD3 and miRNA	Yang Peizeng
429	The genomic neuroimaging and related pathological mechanism study on vulnerability of substance dependence	Hao Wei
430	Research on mapping, cloning and function of causative genes for inherited paroxysmal diseases of the nervous system	Tang Beisha
431	Study the Genetic Susceptibility and Pathogenesis of Psychiztric Diseases	Shi Yongyong
432	Frontal cortical dysfunction in schizophrenia	Zhen Xuechu
433	Genetic Mechanism of Brain Network Connectivity in Schizophrenia	Li Tao
434	multifunctional ultrasonic contrast agent for molecular imaging and therapy	Wang Zhigang
435	Basic research on the application of multifunctional heptamethine cyanine dyes for tumor targeted imaging	Shi Chunmeng
436	Mechanism of Myocardial Viability using Comprehensive Cardiac MR in Rat with Myocardial Ischemia	Gao Fabao
437	Mutant EGFR Molecular Imaging Probe and Molecular targeted Therapy response monitoring	Shen Baozhong
438	Quantificative evaluation of the interaction between the transplanted stem cells and the ischemic myocardium by MRI	Zhao Shihua
439	Pathogenicity and epitope mapping of envoplakin and periplakin	Zhu Xuejun
440	The Search for Psoriasis Susceptibility Genes in Chinese Han Population by Exome Sequencing	Zhang Xuejun
441	The molecular mechanism of oxidative stress triggering cellular immune reaction to vitiligo melanocytes	Gao Tianwen
442	Functional analysis on the TatD-like DNase molecule of Plasmodium species and its correlation with malaria pathogenesis	Chen Qijun
443	The abnormality of tissue-specific mesenchymal stem cells in their regenerative properties and the underlying epigenetic mechanisms	Qiu Guixing
444	The negative regulation of central and peripheral high mobility group box-1 protein on cell-mediated immunity in sepsis	Yao Yongming
445	The role and mechanisms of alarmin HNP1-3 in initiating sepsis induced MODS and its potential therapeutic value	Fang Xiangming
446	The role of phosphorylated CUEDC2 in the tumorigenesis	Zhang Xuemin
447	Cancer stem cells and epithelial mesenchymal transition as a mechanism for androgen-independence process of prostate cancer	Gao Weiqiang
448	A critical role for Atm-mediated Smad1 phosphorylation in DNA damage response and oncogenesis	Li Baojie
449	The relationship of aneuploidy and the resistances of tumor molecular target therapy	Liu Qiang
450	The roles of PrLZ in non androgen dependent androgen receptor signaling in prostate cancer progression.	He Dalin
451	The role of autophagy related gene Atg7 in tumorigenesis	Cao Liu
452	The regulation and functional analysis of KLF4 in tumorigenesis	Liu Zhihua
453	KLF5-regulated epithelial proliferation, differentiation and carcinogenesis	Dong Jintang
454	Molecular regulation of mitochondrial autophagy and its role in cancer development	Chen Quan
455	Identification of a protein network in EMT-mediated chemo-resistance in prostate cancer	Zhang Jian

456	Genetic and epigenetic studies of AR network in individual differences in the development, progression, prognosis of prostate cancer	Xu Jianfeng
457	Epigenetics regulation in tamoxifen molecular mechanisms and resistance in breast cancer	Shang Yongfeng
458	combination of excessive energy intake and vitamin D and calcium deficiency on obesity and type 2 diabetes and dietary intervention	Sun Changhao
459	Study on biomarkers and early health effect of occupational exposure to diesel exhaust emissions	Zheng Yuxin
460	The Study on Genetic Mechanism of Reproductive Damages Induced by PAHs and PAEs	Cao Jia
461	Prospective study on the influence of nutrition and genetic polymorphism on atherosclerosis	Ling Wenhua
462	Epigenetic effects of folic acid on Alzheimer's disease by DNA methylation	Huang Guowei
463	Microtransplantation improve the effects of graft versus leukemia and avoid graft versus host disease	Ai Huisheng
464	Character of mouse macrophage immune tolerance in mixed chimeras and molecular mechanism study	Zhao Yong
465	HMGB1/TGF- β circle plays a critical role in the cardiac allograft vasculopathy	Xia Jiahong
466	The mechanism of MSCs-based therapy for liver failure	Zhang Yanyun
467	Mechanism of PBC pathogenesis and immunotherapy	Lian Zhexiong
468	Studies on the tumor combination therapy based on the molecular targeted drug delivery	Zhang Qiang
469	The study of brain-targeted drug delivery system oriented by small molecular straight-chain tertiary amine derivatives	Zhang Zhirong
470	Study on novel adipokines and insulin resistance	Miao Chaoyu
471	Present and remote effect on treatment of chronic obstructive pulmonary disease: three TCM therapies to tonify the lung and kidney by regulating the multi-dimensional molecule networks	Li Jiansheng
472	Biological mechanism responsible for the cross-talk between acupoints or their combinations and targeted organs	Zhu Bing
473	Study of Gushen Huatan therapy on treating Alzheimer's disease based on Amyloid cascade hypothesis pathway	Wang Ping
474	Regression and stablization of atherosclerotic plaques by eliminating sputum and removing stasis simultaneously	Wu Zonggui
475	Modern Research on Tangshenfang based on the mode of "system to system"	Luo Guoan
476	Modern Basic Research of SIWUTANG on holism	Gao Yue
477	Studies on bioactive compounds and integration of Chinese compound prescription based on the online chemical compounds' knockout/fishing and spectrum-effect relationship profiling	Li Ping
478	Study on the biology base of Daodi herbs	Chen Shilin
479	mechanism of enviromental affect on geoherbism on geoherbs	Guo Lanping
480	The substantial foundation and pharmacological mechanism of antidepressive effect of Xiao-Chai-Hu Decoction	Wu Chunfu
481	Regulation of CREG gene on iPS cell-based cardiogenesis and on iCM reprogramming	Han Yaling
482	The Role of MG53 in Diabetic Cardiomyopathy	Xiao Ruiping
483	The role of telomere, p53 and mTOR in bone marrow failure	Ju Zhenyu
484	The role of SIRT1 in maintaining kidney sodium balance and blood pressure	Hao Chuanming
485	Molecular mechanisms underlying central nervous system regulation of amino acid sensing and	Guo Feifan

	lipid metabolism	
486	Regulation of hepatic glycogenesis and glucose/lipid metabolism by PPP1R3G	Chen Yan
487	Systemic study on the improvement of the bond durability of resinous adhesive restorations	Chen Jihua
488	Dual effects and molecular mechanisms of DAPK1-NMDA receptor interaction in ischemic cell death and regeneration	Lu Youming
489	Molecular and cellular mechanisms of nerve reconstruction by silk fibroin-based tissue-engineered nerve	Gu Xiaosong
490	Canonical transient receptor potential channel(TRPC) degradation in ischemic stroke	Wang Yizheng
491	The role and underlying molecular mechanism of apolipoprotein in HCV infection and assembly	Luo Guangxiang
492	The mechanism of Coronavirus RNA capping and the function of its methylation apparatus	Guo Deyin
493	The transcriptional activity of novel AFP transcription repressor ZBTB20 and its role in hepatocellular carcinogenesis	Zhang Weiping
494	The potential role and mechanism of mTOR signaling in HBV induced hepatocarcinogenesis	Zhang Hongbing
495	Investigations on natural foci and epidemic patterns of tick-borne diseases	Cao Wuchun
496	Mechanism of the formation of aversive emotion memories of morphine withdrawal by actin rearrangement within the amygdala in rats	Liu Jinggen
497	Novel miRNA targets regulating ischemic arrhythmia and sudden death and the miRNA mechanisms under the therapeutic effects of Traditional Chinese Herbs	Yang Baofeng

Funding of Major Research Plan Projects in 2011

No.	Name of Major Research Plan	Head of Expert Group
1	Computable modelling and fundamental algorithms in high performance scientific computing	Jiang Song Institute of Applied Physics and Computational Mathematics
2	Mechanisms of multigenic interactions in microevolution	Chung-I Wu Beijing Institute of Genomics CAS
3	Neuronal Circuits of Emotion and Memory	Duan Shumin Zhejiang University
4	Optoelectronic Materials for Energy Conversion	Zhang Xi Tsinghua University

Serial number	Project Title	Applicant
1	Response in Mesozoic lake systems in northeast China and eastern Inner Mongolia to destruction of Northern China Craton	Sha Jingeng
2	The geothermal response of North China Craton desconstruction:constraints from thermal history of the sedimentary basins	Qiu Nansheng
3	Destruction of North China Craton and its geodynamic relation with Pacific plate subduction	Liu Shaofeng
4	Mesozoic crustal deformation of the western North China craton and its bearing on tectonic processes at the southern edge	Meng Qingren
5	The Deep 3-D structure beneath Nortneast and its relation Pacific Plate	Huang Jinli
6	The fund of academic activity and investigation for key fundamental science problem of near space vehicle	Fang Daining
7	Integration Investigation of supersonic combustion, flow and heat transfer mechanism	Liu Weidong
8	study on pricible of coupling between flying attitude and air dynamics and cooperative control for hypersonic flying vehicle at near space	Mao Jianqin
9	Investigations on interface delamination and thermal-force equivalent test of composite structures under thermal mismatch	Wei Yueguang
10	Essential problems for the failure of ZrB ₂ -SiC UHTCs in thermal shock	Song Fan
11	Flutter Suppression and Experimental Research of Hypersonic Air Vehicles	Yang Chao
12	Measurement of Mechanical Behaviour and Failure Mechanism of Thermo-Protection Coatings at High Temperature	Feng Xue
13	Study on the mechanical properties of MEMS Valve of Piezoelectric Pump	Leng Jinsong
14	Thermal effects on the structural behaviour of lattice materials	Su Xianyue
15	Extension on approaches about predefcting the separation boundary on the surface in supersonic flow	Li Suxun
16	Experimental validation of a new method of drag reduction for high supersonic vehicles	Hong Yanji
17	The aerodynamic mechanism of flow control in hypersonic inlets based on shape memory alloy	Tan Huijun
18	A Theoretical Modelling for Sharpened Nose Aeroheating Under Rarefied Gas Effects Coupled	Tong Binggang

	with Nonequilibrium Real Gas Effects	
19	Some rarefied gas effects on near-space flight	Sun Quanhua
20	study of laser induced breakdown spectroscopy(LIBS) spectroscopy to local equivalence ratio measurement for kerosene fueled scramjet	Yu Xilong
21	Ablation Mechanism Investigation of Ultra-high Temperature Ceramic Matrix Composites in Arcjet Windtunnel	Hu Haifeng
22	Quasi-linearized model and adaptive control of hypersonic aircrafts	Jia Yingmin
23	Research On Strong Robust Adaptive Stability Control of Integrative Flight Control System With structure/Airdynamic/Flight of Near Aerospace Vehicle	Jiang Changsheng
24	Fault-tolerant control technology of near-space vehicle based on adaptive method	Jiang Bin
25	credibility of flight dynamics model for wave rider	Xiang Jinwu
26	Research on large-thrust linear ultrasonic motor and its application for variable sweep morphing wing	Zhao Chunsheng
27	The molecular mechanism of plant hormone action of academic exchange activities	Li Jiayang
28	Molecular mechanism of Modulation of gibberellin biosynthesis and its iteration with ABA	Song Chunpeng
29	Molecular mechanisms of the regulation of GEF by lipid messengers in response to ABA signaling	Zhang Wenhua
30	Studies on the roles of the plant hormone ethylene, gibberellin and VLCFA in regulations of cotton fiber cell elongation	Zhu Yuxian
31	The regulatory mechanism of brassinosteroid signaling pathway and plant development	Wang Xuelu
32	Methodological study of in situ assay in microsamples based on DR5 and DNA terminal protection	Xiao Langtao
33	Dissecting RopGEF signaling in auxin-mediated organogenesis in Arabidopsis	Tao Lizhen
34	Molecular Mechanisms Controlling Brassinosteroid Biosynthesis	Li Jia
35	Molecular mechanism of cross-talk of auxin and brassinosteroid, and the roles in arabidopsis photomorphogenesis	Xue Hongwei
36	In situ Sampling and on-line CE-SPR/LIF-MS of trace gibberellins	Chen Yi
37	Protein ubiquitination in plant ABA and stress signaling	Xie Qi
38	Ethylene receptor-interacting proteins and their regulation of stress responses	Zhang Jinsong
39	Molecular mechanisms underlying jasmonate actions in regulating root growth	Li Chuanyou
40	Mechanism of interaction between auxin and strigolactones involved in regulating gravitropism	Wang Yonghong
41	Coordinated regulation of arabidopsis root meristem size by auxin and GA	Fu Xiangdong
42	Function improvement and technology development of plant hormones analysis platform	Zhu Jinfang
43	The molecular mechanism of ABA-regulated root growth	Gong Zhizhong
44	Mechanism of gibberellin metabolism and regulation of plant growth and development	He Zuhua
45	the expenditure for organizing expert group to do research and run academic conferences	Shang Yongfeng
46	Funds Plan of Research and Academic Exchange for Steering Group of Experts	Zheng Nanning
47	Auditory Models and key technologies of audio processing in driving environment	Wu Xihong
48	The key technologies and platforms for unmanned vehicles in urban environment	Shaw Shih-Lung
49	Scene Description for Autonomous Driving by Multi-view Data Fusion Based on Knowledge Cognitive	Wang Meiling
50	Object Detection and Analysis based on Visual Saliency in Dyanmic Urban Traffic Environment	Zha Hongbin
51	Vision computing optimized with brain function guidance and its application in machine vision	Han Junwei

	based intelligent vehicle navigation	
52	localization and navigation	Yuan Zejian
53	Study on key technology of acquisition and processing for the brain computer interface	Gao Xiaorong
54	Research on Recognitive Capability Test and Its Verification Environment Design	Tang Shuming
55	The off-line testing and evaluating system for environment understanding capability of unmanned vehicle	Liu Yuehu
56	Test on the cognition ability of unmanned ground vehicles and desing and implementation for the test environment	Chen Huiyan
57	Fast localization and recognition of traffic sign in dynamic scene	Liu Huaping
58	Robust Methods for Traffic Signs Detection and Recognition	Wu Fuchao
59	Non-classical receptive field and selective attention-based computational modeling of traffic saliency	Yan Hongmei
60	Research on calculational model of primal sketch extraction for traffic context visual aware	Dai Fang
61	Recognition of traffic voice guidance information and unmanned vehicle path planning	Kuang Jingming
62	The eye movement study of gaze control while driving	Li Ling
63	Research on Key Problems of IR_BCI for Clinic Applications	Guan Jin-an
64	Model-car based Simulation and Control of Intelligent Transportation System	Yang Ming
65	Temporal segmentation of natural audiovisual stream and its neural mechanism	Luo Huan
66	Traffic sign graphic detection, recognition and understanding under complex conditions	Zhang Changshui
67	Traffic and road sign recognition and understanding for driverless vehicles	Cai Deng
68	Key Technique of Auditory model and sound processing	Han Jiqing
69	Neuronal mechanism of visual attention,visual feedback and their application in implantable brain computer interface	Chen Yao
70	Key techniques and their applications for bi-direction and multi-dimensional brain computer interfaces	Li Yuanqing
71	Interaction and cooperative control of multiple vehicles based on visual and auditory information	Xu Youchun
72	Key technologies and platform for unmanned vehicle in urban integrated environment	Mei Tao
73	Research on control strategy of unmanned vehicles and its implementation	Chen Qijun
74	Theoretical and experimental study of entangled photons from optical superlattice	Zhu Shi-ning
75	Nanofabrication of quantum states in complex oxides	Shen Jian
76	Manipulation of topologically protected macroscopic quantum states	Li Yongqing
77	Detection and manipulation of the macroscopic quantum states in superconducting film with atomic layer thickness and its in-plane superlattice	Qiu Xianggang
78	The mechanism and properties of single excitation state in an ensemble of Rydberg atoms	You Li
79	Ultrafast control on chemical reaction channels with femtosecond laser at molecular single quantum state level	Zhang Bing
80	Photon-electron coupling and the macroscopic quantum effect in low dimensional optical resonators	Chen Zhanghai
81	Multi-orbitals dynamical mean-field theory based study on orbital degrees in iron-based superconductors	Lu Zhongyi
82	carrier population on semiconductor confined states and the mechanism of optoelectronic coupling	Li TianXin
83	Detecting and Manipulating Surface States in 3D Topological Insulator by Electrical Transport	Tang Dongsheng

Measurements		
84	A theoretical investigation on the quantum state manipulation based on graphene edge states	Zheng Yisong
85	Construction and Detection of Novel Quantum States in High-Tc Superconductor Nanostructure System	Nie Jiakai
86	Building and detecting the single spin-state based on single molecule magnets	Wang Junzhong
87	High speed and high bandwidth measurement and manipulation of single electron states based on SiGe RF SET	Guo Guoping
88	Some fundamental problems in solid-state quantum computing and quantum simulation	You Jianqiang
89	the precision measurement of trapped and cold Li ion	Gao Kelin
90	Control of atomic states by intense light and multielectron orbital imaging	Zhao Zengxiu
91	A study on the interaction between quantum surface plasmon and coherently prepared atomic ensemble	Gu Ying
92	Single photon source from colloidal quantum dots based on photonic crystal	Xu Xingsheng
93	Single vibrational quantum state, its generation, coupling, control and ultrafast dynamics	Wang Jianping
94	Graphene based stimulated emission of plasmon and THz oscillators	Wang Xuefeng
95	Superconducting Nanowire Single Photon Detection Technology	You Lixing
96	Generation,detection of waveform-controlled single photons and their application in QKD	Zhang Zhiming
97	Crystal materials, structural design and control synthesis.	Hong Maochun
98	Synthesis and properties of crystalline metal-organic frameworks with 4-imidazole-containing ligands	Sun Weiyin
99	Controllable Synthesis and Mechanism Study of Functionalized Noble Metal Crystals Based on Conjugated Polymers	Han Xijiang
100	Novel Rare Earth Functional Compound Crystal Materials: Oriented Design, Controlled Preparation, Luminescent and Magnetic Properties	Yan Bing
101	Assembly study of magnetic function directed MOFs(metal-organic frameworks) containing lanthanide ions	Zhao Bin
102	Studies on ethynylcarbazole derivatives with two photon absorption properties and their related crystalline materials	Du Miao
103	The Design, Structures and Luminescence Properties of Crystal Materials based on d8/d10 Metal Complexes with Alkynyl/Sulfur Ligands	Chen Zhongning
104	Study on the design, synthesis and properties of luminescent complexes of Rare earths	Liu Weisheng
105	Design, Synthesis and Characterization of the Porous Metal-Organic Frameworks (MOFs) for Energy Related Applications	Cai Yuepeng
106	Design, preparation, and properties of ambipolar charge-carrier transporting crystal materials based on porphyrins and phthalocyanines	Bian Yongzhong
107	The Design and Performance Research of Two-Photon Luminescent Materials Based on Ruthenium Polypyridine Complexes	Chao Hui
108	Controllable assembly and functional investigation for Inorganic-organic hybrids with ferroelectric and panchromatic emission	Ren Xiaoming
109	The Research of Crystalline Light-Sensitive Materials Based on Metal-Organic Frameworks with Host-Guest Charge-Transfer	Han Lei
110	Construction and Magnetic Properties of Single-Chain Magnet-Based Molecular Magnetic Materials	Li Licun

111	Mesostructure design of metal oxide semiconductor and control of its photocatalytic properties	Wang Dan
112	First-principal computations on nonlinear optical properties of crystalline materials with structural units containing metal-metal interactions	Wu Kechen
113	Fabrication and investigation of ultrathin iron oxides crystals and their composite materials	Ma Ying
114	Fictionalization Induced Organometallic Crystal Materials, Design, Syntheses and Properties	Jin Guoxin
115	Design synthesis of Pt-WC/Graphene crystalline composite and reaction mechanism for catalyzing methanol electrooxidation	Fu Honggang
116	Synthesis and Characterization of Crystalline Conductive Polymers Featuring Heavier Main Group Element Singlet Diradicals	Wang Xinping
117	Growth and characterization of ternary relaxor ferroelectric single crystal with high properties and high Curie temperature	Long Xifa
118	Structural design and controllable preparation of the new type rare earth doped GYSGG series mid-infrared laser crystal materials with high efficiency and anti-radiation ability	Sun Dunlu
119	Growth and characterization of crystals with large units	Li Chaorong
120	Structure modulation, Growth and NLO Properties Study on BABF crystal	Hu Zhanggui
121	Optimal design and fabrication of epitaxial ferroelectric films with a self-assembled elastic polydomain structures	Ouyang Jun
122	Controlled synthesis, process simulation and mechanism investigation for calcium oxalate crystals & its stones by melamine/Biomass/living membrane biomimetic systems	Wu Qingsheng
123	Control of near zero temperature coefficient of resistance and near zero thermal expansion behaviors in Mn ³⁺ -based Mn ₃ XN(C) compounds	Wang Cong
124	Studies on fabrication of intercalated composite film materials and their photofunctional performance	Wei Min
125	Designed synthesis and optical-electric properties of acentric metal borates constructed from B-O cluster units	Yang Guoyu
126	Structure design and rational synthesis of crystalline inorganic open-framework functional materials	Yu Jihong
127	Investigation and Application of Direct Solid State Crystal Materials of Rare Earth for Time-resolved Fluorescence Immunoassays	Zhang Hongjie
128	The control of multi-stable spin state in crystalline materials and the study of magneto-structural correlation	Duan Chunying
129	Rational Assembly and Function Control of Magnetic Stimulus-Responsive Molecular Crystals	Tong Mingliang
130	Systemic study on the design, growth, and properties of Er ³⁺ -activated laser crystal in infrared region	Huang Yidong
131	Design of functional blocks and inorganic photovoltaic materials	Huang Fuqiang
132	New Perovskite like functional compounds: design, high pressure synthesis & property tuning	Jin Changqing
133	Liquid-phase controllable synthesis of noble metal/single crystalline semiconductor core/shell nanostructures and their optoelectric properties research	Zhang Jiatao
134	Nanofabrication of Plasma Enhanced Raman Spectroscopy active substrate in microfluidic chip	Zhou Yongliang
135	Novel Manufacture Methods for Graphene-based Nano Field-Effect Transistor	Gong Jianru
136	Manufacturing of three dimensional metallic nanostructures and nanodevices based on ion beam irradiation induced deformation	Li Wuxia
137	Novel Visible Near-infrared Wide Band Photodetector Based on Silicon Nanowire Array	Sun Baoquan
138	High-performance one-dimensional II-VI compound semiconductor	Fang Xiaosheng

139	Nanoscale patterning technology on GaN based LEDs	Liu Duo
140	Fabrication of nanoscale devices built on 1-D II-V group semiconductor nanostructures	Shen Guozhen
141	The study of flexiable high speed integrate radio frequency graphene transistor	Cai Weiwei
142	Nanofabrication for High-Efficiency Flexible Thin-Film Photovoltaics of Monocrystalline Silicon	Xiong Yujie
143	Basic research on the manufacture of the optical antireflective nanostructure arrays on the surface of solar cells using block copolymer thin film as template	Guo Shouwu
144	Multi-scale numerical and experimental study on the filling process of nano injection molding	Jiang Bingyan
145	Nano-crystallization material removal mechanisms induced by nanogrinding of novel semiconductor films	Zhang Zhenyu
146	superresolution radial polaration confocal differential microscopy	Qiu Lirong
147	Research on the micro and nano metrology based on the hybrid fiber laser interference technology	Wang Ming
148	Wafer scale fabrication of the ordered low-dimensional nanostructures for the highly sensitive bio-chemical sensor applications	Liu Jun
149	Research on fabrication of nano electromechanical integration based on local construction under low temperature	Zhu rong
150	Nano Imprint Manufacturing of Flexible Graphene DNA probe Array devices	Li Xin
151	Study on Self-assembly and Transfer Mechanism of Colloidal Nanocrystals within Template Confined Space	Wang Minqiang
152	Research on ultrasonic trapping and release of micro/nano particles	Hu Junhui
153	Academic Activities of Supervisory and Administrative Export Boards-Phase Two	Lu Bingheng
154	the research of the key thoery and technology of nanscale pitch standard by laser manipulating of atoms	Ma Yan
155	Nano Fountain Probe Arrays for Large Scale Nanomanufacturing of NEMS and Proteomic Chips	Peng Bei
156	Parallel fabrication of nano-gap electrode arrays based on the film fracture induced by localized material growth	Wang Wenjun
157	Study on the self-merging and self-crystallization growth of nanostructured semiconductor materials helped by patterning selective-area	Fu Ming
158	Research of NEMS Structure Fabrication Technology Based on E-Beam Lithography	Zhang Dacheng
159	Reseach on polumer fiber grating's femtosecond laser fabrication technology	Yu Yongsen
160	Fabrication of nanostructure inside silicon photovoltaic materials and control of its absorpion spectrum	Si Jinhai
161	Small-diameter Polyurethane Artificial Vascular Graft Fabricated by Multi-beam Laser Interference Micro/Nano Fabrication	Dong Wenfei
162	Fabrication of large area nanopore arrays with controllable consistency based on the STED technology	Wang Kaige
163	The fabrication and evolution of novel ordered nano- & microstructures based on in-situ polymerization and the characterastics of polymers	Yang Bai
164	Multiphoton Fabrication of Metallic 3D Micro-Nanostrucutres	Duan Xuanming
165	Manufacturing System and Key Technology of Rotational Near-Field Lithography for Nano-Patterns	Meng Yonggang
166	Study of nanomaterial printing	Cui Zheng
167	Femtosecond Laser Manufacturing Theory and Method for Micro/nano Fiber Device	Duan Ji'an
168	Manufacturing research on scientific issues and key technologies for optical nano-waveguide	Zhang Wendong

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169	Controllable batch fabrication technology on top-down-fabricated silicon nanowire and bio-assembly on its surface	Wang Yuelin
170	Internet-of-Things Technology and System for Sensing Unconventional Emergencies and for Emergency Commanding	Ding Zhiming
171	Social Computing Methods for Perception, Early-Warning and navigation of online information about unnormal emergency	Fang Binxing
172	Population Level Psychological and Behavioral Responses to Emergencies: Developmental Patterns and Interventions	Zhang Kan
173	The cognitive processes and behavior patterns under unconventional emergency: A social psychological approach and intervention	Zhou Xinyue
174	modeling and simulation of emergency cooperation mechanism on unconventional emergency of water disaster	Wang Huimin
175	Psychophysiological response to emergency and the construction of an stress-coping model	Zhang Kan
176	Research on Interactive Mechanism between Online Public Opinion and Extreme Emergency and Related Decision-Making Risk Modeling	Fang Binxing
177	Empirical analysis of information propagation and emotional tendencies of large-scale systems	Shang Mingsheng
178	Academic interflow organization by scientific steering committee of the Heihe Program	Li Xiubin
179	Heihe Watershed Allied Telemetry Experimental Research (Hi-WATER): Experiment Design and Airborne Microwave Remote Sensing	Li Xin
180	Heihe Watershed Allied Telemetry Experimental Research(Hi-Water): Observation on hydrometeorological elements and multiscale Evapotranspiration	Liu Shaomin
181	Heihe Watershed Allied Telemetry Experimental Research: airborne optical remote sensing	Xiao Qing
182	HIWATER; calibration and validation	Ma Mingguo
183	Ecological-hydrological Modeling and parameter optimizing Based on An Integrated Modeling Framework	Zhang Yaonan
184	A spatial decision support system for the integrated management in the Heihe river basin	Nan Zhuotong
185	Understanding cultural and ecological triggers for policies against water catchment degradation- - a comparison study between Heihe and Murray-Darling River Basin	Zhang Zhiqiang
186	Formation and evolution of the Heihe River and the Related Uplift Process in the Middle Qilian Mountains	Pan Baotian
187	Exploring snowmelt runoff processes using isotopic and hydrochemical data in Heihe River headwater catchments	Sun Ziyong
188	Observations and Experiments on Heterogeneity of Soil Hydraulic Properties and Its Effects on Hydrological Processes in the Upper Reaches of the Heihe Watershed	He Chansheng
189	A research on coupling mechanism of heat transfer and water flow of surface water, groundwater, intra-permafrost water, impacted by the climate change, in the region of the upper reaches of the Heihe River	Ge Shemin
190	Research on the relationship between Qilian Mountains subalpine shrub characteristics and eco-hydrological processes	Liu Xiande
191	Study on ecohydrological effects of alpine shrubs in Heihe basin	Song Yaoxuan
192	The effect of the differentiation characteristics of ranching activities on the grassland plant functional traits in nearly 30 years in Upriver Area of Heihe River	Zhao Chengzhang

193	The Coupling Mechanism and Evolution Regularity of Hydrological-Ecological Processes in The Middle Reaches of Hei River	Xu Zongxue
194	Interaction between soil water and groundwater with stream water transferred in downstream of Heihe river basin and its effects on regional ecological-hydrological processes	Xie Zhenghui
195	Eco-hydrological impact of water saving agriculture and multi-scale water use efficiency evaluation in Heihe Basin	Huang Guanhua
196	Water Right Based of Coupling Hydrology-Ecology-Economic System and Sustainable Management on Heihe Basin	Wang Zhongjing
197	Integrated study on water-ecological-economic model in the middle reach of Hei River	Xu Zhongmin
198	The Coupled Mechanism Study of Water Environmental Evolution and Human Activity in Heihe River Basin in Recent Fifty Years	Zhang Dawei
199	Uncertainty study on the integrated surface-subsurface hydrological modeling at Heihe Basin	Zheng Yi
200	Assessment in crop irrigation water demand and observation in water and soil environmental effects in the newly cultivated farmalands of the marginal oasis in the middle of Heihe river basin	Su Yongzhong
201	Research on ecological - hydrological processes of irrigating oasis in the middle reaches of Heihe River through coupling crop growth - hydrological model	Zhou Jian
202	Research on Groundwater circulation patterns in Badain Jaran Desert and its significance for the desert wetlands ecosystem	Hu Xiaonong
203	Use on atmospheric vapor and its adapted mechanism of desert plant	Xiao Honglang
204	Study on the evolution of terminal lakes and the response mechanism of wetland structure in lower reach of the Heihe River	Xiao Shengchun
205	Genomics and proteomics study of drought tolerance mechanism of typical psammophytes plants in Heihe basin	He Junxian
206	Physiological characteristics of water consumption of drought-tolerant plants and molecular mechanisms adapted to consistent water stress	Su Yanhua
207	Studies on micro-morphological and ultra-structural characteristics and the drought resistance mechanism of leaf in plants in the arid areas of middle-lower reaches of Heihe River	Liu Yubing
208	Study on Radiation Damage of Zirconium Alloys in The Reactor	Peng Shuming
209	Investigation of radiation effects and evolution of micro-structure in materials under synergic interactions of atomic displacement, helium and hydrogen	Yuan Daqing
210	Study on the key technology of the high current proton linac and its RAMI	Tang Chuanxiang
211	R/D on the long-term reliability of intense H ⁺ sources and LEBT for ADS	Zhao Hongwei
212	Research on the security and mechanism of transmutating the minor actinides and long life fission products using the accelerator driven sub-critical reactor	Wu Hongchun
213	Studies on highly efficient separation method of minor actinides using novel BTPs complexants	Wei Yuezhou
214	The studies of electronic structures and properties for Np and its compounds	Dong Chenzhong
215	New UV narrow bandwidth laser for isotopes separation with one step	Teng Hao
216	Theoretical Study of Nuclear Fuel Breeding and Transmutation Based on TWR	Tian Wenxi
217	Research on energy dependence of the fission yield and neutron spectrum for ²³³ U and ²³² Th	Shu Nengchuan
218	Corrosion and irradiation damage studies of structural materials in liquid Lead-Bismuth Eutectic (LBE) for Accelerator Driven Sub-critical System (ADS)	Sun Jianrong
219	A study of the correlation between migration of element and corrosion for nickel-base alloys in molten salt reactor by the multifunction scanning nuclear microprobe	Li Yan
220	The chemical behavior and migration of nuclides in the presence of humic substances and microbe	Liu Ning

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223	Extraction of actinides(III) and lanthanides(III) by novel diglycolthioamides and their mechanism	Ding Songdong
224	Development of Evaluated Nuclear Data and Processing Code for	Wang Kan
225	New method research on Neutronics Design of MA Transmutation by Fast Neutron Zone in Combined Non-fertile and Uranium Assembly	Yu Tao
226	Novel potential candidate material for reactors and its behaviour under irradiation	Shi Liquan
227	Synthesis of carbon nanotube magnetic composites for separation of fuel reprocessing and adsorption properties	Chen Changlun
228	Separation of heat generators from HLLW utilizing the novel supramolecular recognition materials by extraction chromatography	Zhang Anyun
229	Electrochemistry of Actinide and Key Fission Products in Ionic Liquids	Wu Jizong
230	Director of research and academic exchanges meeting the expenses	Tian Zhongqun
231	Investigating the structure and interaction mechanism of surface and interface self-assembly by synchrotron-based GI-XAFS technique	Wang Jianqiang
232	The application of self-assembly in improving the drug solubility	Lu Tongbu
233	Self-assembly in Biomineralization and Biomimetic Repair of Hard Tissues	Tang Ruikang
234	Study on a Polymer Blown Bubble Film Approach for Self-assembling One-dimensional Nanostructures	Cao Anyuan
235	Photoswitchable catalysis mediated by the reversible assembly and disassembly of SiO ₂ particles	Zhang Tierui
236	Metal Cluster-Centered Coordination Self-Assembly Based on Metal-Ligand Macrocycles	Zhao Liang
237	Controllable and Hierarchical Self-Assembly of a Series of Electron-deficient Conjugated Systems with Rigid Rod Conformation	Zhao Xin
238	anion- π interaction directed molecular self assembly	Wang Dexian
239	Studies on molecular assemblies based on novel triptycene derived hosts	Chen Chuanfeng
240	Design and Synthesis of Tunable Chiral Self-Assembled Molecules and Studies on Their Catalytic Properties	Wu Jing
241	Design and construction of new type of metal chalcogenide (oxide) based nanostructures in ionic liquids	Huang Xiaoying
242	Control and design of assemblies of nano-microstructure containing gold nano particles for the investigation of cell death and growth	Jiang Long
243	Linear Assembly of Gold Nanorod-Organic Molecule Hybrid Systems and Their Applications in Biorecognition	Wu Xiaochun
244	Study on the Halogen bonding and its application in self-assembly	Liu Chengbu
245	Simulate two-dimensional self-assembly process by local molecular field theory with swarm intelligence	Hu Zhonghan
246	Simulations of Lipid Raft Mediated Transmembrane Signaling	Gao Lianghui
247	Controllable aggregation behavior of the novel ionic liquids driving by π - π stacking	Zheng Liqiang
248	pH-sensitive reversible self-assembly of amphiphilic carbonaceous cages at the water-oil interface and their catalytic properties	Zhou Kebin
249	Fabrication of isolable chiral supramolecular aggregates from achiral hydrophobic organic molecules in aqueous solution	Jiang Yunbao

250	Structural Modulation and application of SWNTs-based Supramolecular Nanoarchitecures	Guan Lunhui
251	DNA Origami directed self-assembly of metal nanoparticles spiral chain	Ding Baoquan
252	External stimuli-responsive p-conjugated molecular systems: Synthesis, self-assembly and modulation	Zhang Guanxin
253	In situ Characterization of self-assembly systems by femtosecond SFG spectroscopy and ultrafast flash heating	Wang Zhaohui
254	Instrumental development of imaging studies on the self-assemble films at curved interfaces	Zhang Yiguo
255	Bio-inspired energy conversion and storage system based on smart synthetic nanochannel: from theory to prototype devices	Jiang Lei
256	Protein and peptide self-assembly: From regulation mechanism to applications	Wang Wei
257	Chiral responsive bio-interface materials and their applications on the modulation of peptide and protein conformations	Sun Taolei
258	Effects of self assembly of amphiphilic polymers in water on the fraction of the active form of some drugs	Ding Jiandong
259	Fabrication of polymer photonic crystals without crack and their properties	Wang Jingxia
260	Tadpole-like single chain Janus particles: their highly efficient preparation, self-assembly and properties of the resultant superstructures	Chen Daoyong
261	AFM-based single-molecule force spectroscopy study of the assembly and disassembly process processes in typical supramolecular systems	Zhang Wenke
262	controlled polymerization of Supramolecular Polymers by adjusting geometrical structures of buliding blocks	Yin Shouchun
263	The phase behavior of inhomogeneous polymer blends based on wormlike chain model	Tang Ping
264	Self-assembly of Living Cells for Tissue Engineering	Chen Xing
265	Imaging analysis of microRNAs in living cells based on the self-assembly of nucleic acids	li Zheng Ping
266	Controlled self-assembly of nano-drugs for conquering mulidrug resistance of cancer	Liang Gaolin
267	Assembly and integration of multifunctional nanopobes for biosensing	Song Shiping
268	the self-assemble and applications of the hierarchical surface-enhanced structure from DNA, metal nanoparticles and photonic crystals	Li Mingzhu
269	Metal-Metal Bonding Directed Self-Assembly Chemistry of Supramolecular Organometallic Functional New Systems	Yu Shiyan
270	Self assembly of ultrathin nanostructures and their properties	Wang Xun
271	Synthesis, aggregation and properties of organometallic catalytic materials via self-assembly	Ding Kuiling
272	Spectroscopic investigation on the self-assembling process	Liu Shilin
273	Assembly structure and its modulation of peptides related to disease	Wang Chen
274	Three dimensional networks self-assembled by nano-sized building blocks towards energy applicatio	Guo Yuguo
275	Inspired molecular Chaperone structure and function by block copolymer hierarchical self-assembly	Shi Linqi
276	Assembly perfomances of block polymers and polymer-inorganic nanorod composites induced by external fields	Liang Haojun
277	Bioinspired hirerarchical self-assembly of hyperbranched polymers and the cytomimetic chemistry	Yan Deyue
278	Scientific activities of the South China Sea Deep Program	Wang Pinxian
279	Nanominerslogy and geochemistry of authethic precipitates in deep sea methane seeps from South	Sun Xiaoming

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280	A Comprehensive Paleomagnetism, Magnetostratigraphy and Environmental Magnetism Investigation of Sediments from Site 1148, ODP Leg 184 and their constraints on the tectonic and environmental evolution of the South China Sea	Wu Huaichun
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285	Incipient tectonic evolution of the South China Sea and its sedimentary records	Shao Lei
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287	Seismic constraints on the lithosphere and upper mantle structure beneath South China Sea from observations	Yang Ting
288	Imaging the upper mantle structure of the South China Sea using an OBS array: Testing the hypothesis of a Hainan mantle plume	Chen Yongshun
289	Taiwan Tertiary stratigraphy, paleoenvironment and sedimentology response to South China Sea tectonic evolution from opening to closure	Huang Qiyu
290	The response of biogenic particle flux and biological pump to the monsoon and ENSO in the South China Sea	Chen Jianfang
291	the funding of consultant and academic exchanges for expert group	Wang Hongyang
292	Viral mutations-oriented dynamic regulatory networks and key nodal molecules during malignant transformation of hepatitis B	Cao Guangwen
293	Implication of tRXRa-dependent signal pathways in the cross-talk between non-resolved inflammation and tumorigenesis	Zhang Xiaokun
294	molecular mechanism of malignant transformation of lung Chronic inflammation	Deng Jiong
295	Expression, function, and mechanism of cytokine and growth factor signaling network key regulator in inflammation-cancer transition	Yu Qiang
296	The value of NF-kB-URG7- β -catenin pathway in promoting malignant transformation of chronic hepatitis B persistence	Liu Jie
297	Molecular systems pathomic mechanisms by which robust networks control the malignant progression of non-alcoholic steatohepatitis (NASH) to hepatoma in model mice produced by inducible loss of the transmembrane Nr1 transcription factor	Zhang Yiguo
298	Roles of Tim3-mediated dysfunction of NK and its regulatory net in the malignant transformation from non-resolving hepatitis B to hepatocellular carcinoma	Ma Chunhong
299	Toll like receptor-4 signaling pathway, hepatic stellate cells, inflammatory and fibrogenic microenvironment and hepatocarcinogenesis	Guo jinsheng
300	Tumor Glycosaminoglycans and Molecular Mechanism Underlining Regulation Network of Malignant Transformation of Nonresolving Inflammation	Zhang Lijuan
301	Novel inflammatory cytokine of CTRP4 in non-controllable network effects and mechanisms of malignant transformation of inflammation research	Wang Lu
302	Inter-cell gene network in tumor inflammatory microenvironment and combinatorial drug targets identification	Xiong Jianghui
303	EBER induced inflammation via pattern recognition receptors and its association with initiation	Sun Lunquan

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304	Analyzing key genes and pathways underlying the transformations from nonresolving inflammation to cancer by integrating multi-dimensional high-throughput 'omics' data	Li Xia
305	Mechanism of CRF peptides' role in the transformation of UC into ca	Li Shengnan
306	The function of positive feedback loops driven by miR-21 in the development of inflammation associated cancer	Zhang Junfeng
307	Regulatory network and molecular mechanisms involved in malignant transformation of chronic atrophic gastritis into gastric cancer	Lin Donghai
308	Molecular delineation of CCL18-induced tumor metastasis and progression	Ding Xia
309	Myeloid TGF-beta signaling regulates colonic homeostasis, inflammation and tumorigenesis	Liu Yongzhong
310	Identification, function analysis, and expression study of miRNAs involved in HP induced gastric cancer	Yu Jia
311	Molecular regulation network of microenvironment during the transformation of colon cancer from colitis	Wang Hongying
312	Mechanisms of mesenchymal stem cells in uncontrolled inflammation derived gastric carcinogenesis	Xu Wenrong
313	Role of calcium ion signalling in the pathogenesis of chronic hepatic inflammation-associated hepatocellular carcinogenesis	Tuo Biguang
314	The key role of A20 in regulating network between T-cell mediated inflammation and malignant transformation	Li Yangqiu
315	Examination Study of Major Pitch Points and Regulatory Network in Epithelial Malignant Transformation Induced by RAS-Associated Non-controllable Inflammation	Yang Gong
316	The Role of Lipidome on Nonresolving Inflammation in liver	Fu Jin
317	Liver inflammation promotes tumorigenesis through activation of Fox transcription factor	Wu Kaichun
318	The role of STAT3-DNMT1 in Hp-induced CAG carcinogenesis progression	Hong Jie
319	Role of inflammatory microenvironment and EMT in the progression of prostate cancer	Huang Yiran
320	Molecular mechanisms of the miRNA regulatory network in malignant transformation of prostate nonresolving Inflammation	Yu Jianxiu
321	The comparative proteomic study and network analysis of EGCG and COX-2 inhibitor on nonresolving inflammation malignant transformation	Li Xuejun
322	The role of protein-tyrosine phosphatase SHP-2 in colitis-associated carcinogenesis	Gu Yanhong
323	Involvement of ER stress on the transformation of HBV-infected hepatitis to hepatoma and screening of its key molecules and drug targets	Shen Yuxian
324	Epigenetic network and regulated targets in the progress of HPV-infected cervical cancer	Lv Hong
325	The role of FcγR in tumor-associated macrophage in nonresolving inflammation and carcinogenesis	Yang Yong
326	Study on the regulatory network of transformation from non-resolving inflammation to cancer using small molecular probes	You Qidong
327	Study on the molecular mechanism of the development of COPD into lung squamous tumor based on micro-fluidic chip mimicking the microenvironment in vivo	Wang Qi
328	Investigation on the numerical simulation method, modeling and mechanism of compressible turbulence in high energy density physics	Chen Shiyi
329	Computable model and algorithm for the simulation of laser inertial confinement fusion	Li Jinghong
330	Theory and Applications of High Performance Numerical Methods for Stochastic Differential	Hong Jialin

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333	Progressive pattern discovery of complex disease from high throughput data	Gao Lin
334	An exploration of computable modeling and algorithm for problem driven large scale optimization	He Bingsheng
335	Computational modeling of high throughput sequencing and algorithms of base-calling	Li Lei
336	Low-dimensional sparse approximation methods for high-dimensional data from plant molecular design	Xu Yuesheng
337	Fast finite element/volume method for fractional partial differential equations and its computable modeling	Yang Danping
338	Parallel multilevel iterative methods for solving large-scale discrete systems and exploiting relative software	Wu Jinbiao
339	Coulomb many-body systems in biological and colloidal sciences: Algorithm, Modelling and Simulations	Xu Zhenli
340	High Order Finite Volume Method on Unstructured Meshes and its Application in Numerical Simulation on Conjugate Heat Transfer for Turbine	Song Songhe
341	High-performace spectral methods for nonlinear eigenvalue problems	Li Huiyuan
342	A new kind of finite element method for solving electromagnetic scattering problems	Hu Qiya
343	the Numerical study of Nonlinear evolution equations and application for the biological models	Zhang Mengping
344	Dynamics model and algorithm research for complex biological network transmission based on the fractional calculus theory	Jiang Xiaoyun
345	Study of High-Performance Parallel Algorithm with Extensibility on Multiphase Space Numerical Simulation for Petaflops Supercomputer	Li Zhihui
346	Study on high accuracy and fast methods for aircraft optimal shape design and moving boundary problems with large Reynold's number	Liu Tiegang
347	Numerical simulation and its application for multi-material driven by detonation	Ni Guoxi
348	Genuinely multidimensional high fidelity methods for multi-medium large deformation fluids	Wang Shuanghu
349	New extendible algorithms for large-scale parallel computation:Efficient Domain Decomposition Methods for Ill-posed Inverse Problems	Feng Hui
350	Highly scalable algorithm for numerical solution of PDEs on heterogeneous supercomputers	Yang Chao
351	Research on New Scaleable Algorithms for Radiative Hydrodynamics on Large Scale Heterogeneous Multicore Parallel Computers	Liu Xingping
352	Solvable formulation and convergence agorithms for structural optimization problems with bounded uncertainties	Kang Zhan
353	A highly scalable particle generalized FEM for structural analysis	Tian Rong
354	Nunerical method for the twophase flow field with phase transformation	Huang Diangui
355	Chemical Fluid Dynamics Computational Method Based on Reduced Model of Detailed Reaction Mechanism	Wei Xiaolin
356	Study of high-order implicit/parallel hybrid DG/FV method on hybrid grids	Zhang Laiping
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358	Massively Parallel Simulation of microturbulent transport in magnetic fusion plasmas	Xiao Yong
359	The study of predicting drug repositioning based on multi-scale molecular network	Zhao Xingming

360	Studies on the complex feature modelling and machine learning algorithms for large-scale protein data	Shen Hongbin
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362	Research on Computable Models and Algorithms of Massive Information of Multi-elements with Complicated Interactions	Shao Fengjing
363	Multiple-genes Working Mechanisms in Microevolution	Chung-I Wu
364	The genetic study on the adaptable evolution of skin color in East Asians	Shi Hong
365	Impact of agriculture origin and development in China on the microevolution of human gene families for alcohol metabolism	Li Hui
366	Adaptive evolution of the key hibernation-related genes among hibernating and non-hibernating types of the greater horseshoe bat (<i>Rhinolophus ferrumequinum</i>)	Feng Jiang
367	Genomic Evolution of Domesticated Populations of <i>Saccharomyces cerevisiae</i>	Bai Fengyan
368	Evolution of duplicate genes and response mechanism to abiotic stress in soybean	Tian Zhixi
369	The molecular evolution researches on the Antarctic icefish cardiac vascular system development and functional adaptation	Xu Qianhua
370	Evolution of transcription network for environmental adaptation	Ma Hong
371	Evolution of MYB Gene Family during soybean domestication	Feng Xianzhong
372	Microevolution study of colon cancer based on AOM mouse model	Liu Siqi
373	New method to detect recent positive selection and its application to Han-Chinese	Li Haipeng
374	A population genetic model for tumor cell growth dynamics and data collection	Zhai Weiwei
375	A study on microevolutionary process of the tumor heterogeneity in the light of gene expression fluctuation	Zhang Zhihua
376	Genetic variation detection and integrated evolutionary genomics platform for non-model organisms	Zhao Fangqing
377	The molecular mechanism and genetic basis of adaptive evolution of endemic fish in the Tibetan Plateau	He Shunping
378	Genome variations of plants in severe environment of Tibet plateau and adaptive evolution mechanism	Zhong Yang
379	Genetic and genomic basis for rapid domestication of second-generation energy crops	Sang Tao
380	Cellular evolution of somatic mutation accumulation and tumorigenesis in human	Lu Xuemei
381	Molecular mechanism of high altitude and feeding habitat adaptation of <i>Rhinopithecus</i>	Yu Li
382	Research on Hypoxia Adaptation Mechanism among Worldwide High-Altitude Local Residents	Zeng Changqing
383	Brainnetome of Memory Defects in Schizophrenia	Jiang Tianzi
384	interaction between emotion and visual perception/memory and its neural circuit	Chen Lin
385	Inhibitory circuitry mechanism underlying modulation of emotion and memory	Xu Tianle
386	CRH circuitry of prefrontal cortex in the pathogenesis of depression.	Zhou Jiangning
387	the effects of abnormal tau on hippocampal neuro circuits and the development of Alzheimer disease memory disorder	Wang Jianzhi
388	Optogenetics platform: development and application in the study of emotion and memory circuits	Wang Liping
389	New technologies to label and study memory-related neurocircuits	Xu Fuqiang
390	Study of Neural Circuits of Anhedonia, Working Memory and Prospective Memory in Schizophrenia	Chen Chuqiao
391	Computational study on neural circuits of memory and memory deficits	Wu Si

392	The genetic and neural basis of affective cognition	Liu Jia
393	Structal and Functional Circuit of Anxiety	Luo Yuejia
394	The facial emotion recognition-related neural circuitry in high functioning autism	Ke Xiaoyan
395	Characterize the neural circiuts and signal conjunction of decision making	Han Junhai
396	Neuroimage based brain network analysis and its application to studies of neurodegenerative diseases	Fan Yong
397	In Vivo Electroanalysis for Bioactive Molecules involved in Emotion and Memory	Yu Ping
398	GABAergic System Mediated Plasticity of Memory Formation and its Neural Circuits	Li Yan
399	Neural Circuitry of Emotion-Learning and Frontotemporal Dementia	Zhu Li
400	Multimodal information processing and storage in the hippocampus and anterior cingulate cortex	Wang Zhiru
401	Peripheral immune challenge-induced first order visual sensory circuit remodeling in autism	Zhou Yudong
402	Roles of hippocampal newborn neurons in A β -induced neural circuitry deficits	Sun Binggui
403	The effect of Neuregulin-1 and ErbB4 on neuronal circuit of cortex	Li Xiaoming
404	Functional circuit and personality characteristics in bipolar disorder - Researches on the emotion-related cortical cognition and brainstem reflex.	Wang Wei
405	Neurobiogic Mechanism underlying Consolidation,Reconsolidation and Storage of Pathological Emotional Memory	Lu Lin
406	In-vivo real-time monitoring of the secretion of estrogens and related active substances by neurons	Zhao Meiping
407	The Role of tunneling-nanotube and cellular transport between neuronal cells in Alzheimer's disease	Zhang Yan
408	The association of the gene polymorphism with brain and behavior change in heroin abuse subjects	Shi Jie
409	How does emotional social feedback facilitate learning in humans and what neural mechanisms are involved?	Keith M. Kendrick
410	Multimode brain network study on emotion neuronal circuit	Gao Qing
411	Dynamic connection and neural coding in neural circuit between frontal cortex (FC) and hippocampus of rat during working memory	Tian xin
412	The role of schizophrenia-related protein dysbindin on neurodevelopment and pathogenesis	Wang Guanghui
413	Dynamic morphology plasticity stduy on the interneuron- - granule cell within olfactory bulb neuronal circuit in Xenopus tadpoles	Hu Bin
414	Effect of odor enviroment alteration on the function of entorhinal cortex-hippocampus circuit and their roles in the memory deficits of Alzheimer's disease and the underlying mechanisms	Zhu Lingqiang
415	Study the plasticity of neural circuit in prefrontal cortex of depression mouse in vivo	Xu Tonghui
416	Distinct neural circuits and interactive effects of APOE genotype on the late-life depression and amnestic mild cognitive impairment	Zhang Xiangrong
417	BDNF mechanisms underlying the changes of emotion and cognition induced by adolescent stress and early intervention	Wang Weiwen

Funding of Projects in Research Fund for International Young Scientist in 2011

Serial number	Project Title	Applicant	Home Institution
1	Closed Loop Flow Control for Wing Trailing Edge Flow-Induced Noise Reduction	Edward Peers	Peking University
2	Research on kinematics and abundances of stars in the Galactic halo based on the LAMOST spectroscopic survey	Kenneth Wayne Carrell	National Astronomical Observatories, Chinese Academy of Sciences
3	Physical and electrical characterization of advanced nanomaterials using Atomic Force Microscope and related techniques	Mario Lanza	Peking University
4	Quantum Light Source and Atomic Coherence for Precision Spectroscopy	Florian Hudelist	East China Normal University
5	Improvement of natural satellites and asteroids ephemerides	Josselin Desmars	Shanghai Astronomical Observatories, Chinese Academy of Sciences
6	Fatigue and Fracture Mechanics of High strength Alloys in super long life regime	Muhammad Khan	Kashif Sichuan University
7	Effects of Morphology and Surface Chemistry of Water Stable Fullerene Nanoparticles on Contaminant–Fullerene Interactions	John Fortner	Nankai University
8	Tetraphenylethene End-Capped AIE-Active Fluorophores	Matthew P. Aldred	Huazhong University of Science and Technology
9	Synthesis of Organic n-Type Conductors	Jakob Kryger Sorensen	Institute of Chemistry, Chinese Academy of Sciences
10	To identify the Nbs1-extragenic-suppressor (NESR) gene repressing cellular lethality caused by Nbs1 depletion in response to DNA double-strand breaks	Jannie Michaela Rendtlew	Beijing Institute of Genomics of Chinese Academy of Sciences
11	Overexpression studies of the N- and O-linked glycosylation pathways in <i>Aspergillus fumigatus</i>	Thomas Hartmann	The Institute of Microbiology, Chinese Academy of Sciences
12	Modeling continental scale carbon dynamics of Asian forests: Improvements to vegetation dynamics and representation of disturbance	Benjamin Poulter	Peking University
13	The role of fungal generated volatiles in the biology of the Chinese pine invasive beetle,	Christian Salcedo	Institute of Zoology (IOZ), Chinese Academy of Sciences

	Dendroctonus valens			
14	Biochemical elucidation of the influenza A neuraminidase mechanism	Christopher J. Vavricka J		The Institute of Microbiology, Chinese Academy of Sciences
15	Biochemical elucidation of the influenza A neuraminidase mechanism	Monica Sleumer		Tsinghua University
16	Validity assessment of forest management policy in the Qilian Mountains: A case study of multi-agent model	Gordon Hickey	Maxwell	Lanzhou University
17	Enzyme Display on Ure2 Amyloid Fibrils: Structural Probes and Bionanomaterials	Elizabeth Sawyer	Bryony	Institute of Biophysics, Chinese Academy of Sciences
18	Phytoremediation mechanism in arsenic contaminated soil and groundwater	畑山 正美		Tsinghua University
19	Understanding Cambrian to Ordovician sponges using exceptionally preserved faunas	Joseph P. Botting		Nanning Institute of Geology and paleontology, Chinese Academy of Sciences
20	Reconstructing 2000 years of Indian summer monsoon variability with high-resolution lake sediments from the Tibetan Plateau	Bird Broxton Williams		Institute of Tibetan Plateau Research, Chinese Academy of Sciences
21	Microbiologically induced carbonate precipitation based remediation of heavy metal contaminated sites	Varenyam Achal		Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences
22	Study on the low temperature SCR catalysts derived from solid waste pyrolysis carbon	Surjit Singh		Nankai University
23	The development of a bioresponsive bone replacement	Liam Michael Grover		Central South University
24	High-order Bragg resonance of surface waves by bottom ripples with and without the effect of current	Mohammad Reza Alam		Hohai University
25	Fire-resistant polymers from algal biomass	Evan Beach		Central South University
26	Development of novel FBG-based and interferometric sensing systems for structural health monitoring	Anton V.Dyshlyuk		Dalian University of Technology
27	ZnO Nanowire Thin Film Transistors	Sieglinde		Southeast University
28	Fundamental Research on Multi-Component Colloidal Superstructures	Benjamin Biron Yellen		Shanghai Jiao Tong University
29	Simplified distributed power generation with induction generator using a new grid connecting technology named MERS	Takanori Isobe		South China University of Technology
30	Efficient Learning from Noisy Data	Andrew Tzu-Kang Wan		Tsinghua University
31	Ultrahigh-Q-factor on-chip microcavity for sensing applications	Andrea Armani		Tianjin University

32	Event-B based Development of Safety Reconfigurable and Automated Systems	Olfa Mosbahi		Xidian University
33	Energy efficient video compression based on wavelet filtration and adaptive arithmetic coding	Evgeny Belyaev		Xidian University
34	LCD active matrix addressing using low temperature technology	Jacques Emmanuel		Southeast University
35	Computability theory and Informatics	Georgios		Institute of Software, Chinese Academy of Sciences
36	A cross-cultural investigation of the performance impact of high performance work systems in professional service firms	Janine Bosak		Northeastern University
37	An Investigation into a Patterns Approach for Collaborative User Requirements Elicitation in China	Aida Azadegan		The University of International Business & Economics
38	fMRI study of the central effects of acute acupuncture on glucose levels, core body temperature, and satiety in overweight males	Karen M. von Deneen		Xidian University
39	Genome-wide identification of transcription factor binding and epigenetic modifications associated with type 2 diabetes and aging.	Christopher Green	Daniel	Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences
40	The Effect of Type 2 Diabetes Mellitus on Brain Function and Balance in Elderly Adults	Brad Manor		Peking University
41	Development of distance function preserving finite element level set methods	Johan Shu-Ren Hysing		Shanghai Jiao Tong University
42	Non-commutative Functions and its Applications to Operator-valued Martingales	Mihai Popa		Central South University
43	Matrix isolation of Yb atoms for single atom spectroscopy of isolated species	Ricardo Lewis Lambo		University of Science and Technology of China
44	The source and fate in the environment of short-chained (C4, C6) perfluorinated compounds and their isomers	Sachi Taniyasu		Nankai University
45	Improved Artemisinin Production from Artemisia annua by Metabolic Engineering	Amanda Stiles		Institute of Process Engineering, Chinese Academy of Sciences
46	Factors affecting the biodegradation of quaternary ammonium compounds in biological treatment systems	Ulas Tezel		Nankai University
47	Molecular Mechanism of Directional Differentiation of hESC	Da Jung Jung		Tsinghua University
48	Dissecting synaptic mechanism and pathogenesis of synapse-related diseases in Drosophila	Kuldeep Kaur		Institute of Genetics and Developmental Biology, Chinese Academy of Sciences

49	Phylogeny and evolution of the fern genus <i>Polystichum</i> (Dryopteridaceae)	Timothée Le Péchon	Chengdu Institute of Biology, Chinese Academy of Sciences
50	Between-unit interactions and relationships in a multilevel society of snub-nosed monkeys	Cyril Grueter	Institute of Zoology, Chinese Academy of Sciences
51	Regulation of Alternative Splicing in Lung Cancer	Monika Heiner	Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences
52	Integrating next generation sequencing results with biological databases for efficient discovery of disease associated variants	Alexander Tchourbanov	Beijing Institute of Genomics, Chinese Academy of Sciences
53	Association of the IGF-IGFBP axis with single nucleotide polymorphisms in a multi-strain mouse model	Miro Ferreri	China Agricultural University
54	Phylogeography of lianas in a dipterocarp forest at Mengla, Yunnan	Mareike Roeder	Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences
55	Analysis of epigenetic modifications in mitochondrial genes that influence human aging and susceptibility to age-related disease.	Boyd-Kirkup Douglas Jerom	Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences
56	Characterization of two conserved H2A histone variants in stony corals and their response to bleaching	Marleen Perseke	South China Sea Institute of Oceanology, Chinese Academy of Sciences
57	Functional organization of Tibetan alpine plant communities	Tatiana Elumeeva	Chengdu Institute of Biology, Chinese Academy of Sciences
58	STRUCTURAL ANALYSIS OF COMPLEX BETWEEN NECTIN AND ITS RECEPTOR/LIGAND	Maslin Osathanunkul	Institute of Microbiology, Chinese Academy of Sciences
59	Peat records of long-term atmospheric deposition of Pb and Hg in China, and their possible source identification using their isotope fingerprinting.	Atindra Sapkota	Institute Of Geochemistry, Chinese Academy of Sciences
60	APIX: Observation Network for Air Pollution and Health Impacts in Central China	Benjamin Guinot	Institute of Earth Environment Chinese Academy of Sciences
61	Biomass burning recorded in Tibetan Plateau ice cores	Natalie Marie Kehrwald	Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences
62	Elucidation the role of solid oxide in hot metal dephosphorization reaction and development of multi-phase flux refining process	Hiroyuki Matsuura	Central South University
63	Diagnostics of Composite Insulators	Lutz Bernhard	Tsinghua University
64	Development of a new technique for interpreting pavement roughness profile data	Habtamu M. Zelelew	Southeast University
65	Development of an Omnidirectional Wheelchair Robot with Adaptive Admittance Control for Interactive Walking Support on Uneven Terrain	Jeffrey Too Chuan Tan	Nankai University

66	Multi-scale representations of video content and application in video browsing and retrieval	Luis Herranz Arribas	Institute of Computing Technology of the Chinese Academy of Sciences
67	Research into Safety Assurance and Development of Future Railway Signal Systems	Oleg Lisagor	Beijing Jiaotong University
68	Fast Microvessel Detection in Virtual Slides of Solid Tumors	Mutlu Mete	University of Electronic Science and Technology of China
69	Provably Secure Constructions for Cryptographic Hash Functions and Their Applications	Mohammad Reza Reyhanitaba	University of Electronic Science and Technology of China
70	Enterprise Service deSign based on ExistiNg software Architectural knowLedge (ESSENTIAL)	Paul Ton de Vrieze	Wuhan University
71	ZnO nanowire arrays-based highly sensitive film bulk acoustic resonators	Luis Garcia-Gancedo	Zhejiang University
72	Energy-efficient scheduling techniques in Cloud Data Centers	Chee Shin Yeo	University of Electronic Science and Technology of China
73	Graphene based flexible transparent conductors and their application in electrically switchable smart windows	Tawfique Hasan	Zhejiang University
74	Automatic Logistic Planning	Claus Thomas Weise	University of Science and Technology of China
75	Large-scale Heterogeneous High Performance Computing System	Pavan Balaji	Shenzhen Institutes of Advanced Technology Chinese Academy of Sciences
76	Sorting Unorganized Photo Sets for Urban Reconstruction	Keith Noah Snavelly	Shenzhen Institutes of Advanced Technology Chinese Academy of Sciences
77	Technology-based Entrepreneurship of Tsinghua University Alumni	Carles Eesley	Tsinghua University
78	Online Optimization for Dynamic Power Management	Hiroshi Fujiwara	University of Electronic Science and Technology of China
79	Imaging Myeloperoxidase Activity to Evaluate Treatment Effects in Experimental Multiple Sclerosis	Benjamin Pulli	Tongji University
80	Nrf2 activation plays a critical role in n-3 PUFA-conferred neuroprotection against ischemic brain injury	Peter S. Vosler	Fudan University