中国矿物岩石地球化学学会
第 16 届侯德封矿物岩石地球化学青年科学家奖
评 选 公 告

2016 年 4 月 9 日，我会第八届侯德封奖评选工作委员会在杭州召开了评审会。19 名评选委员会委员到会。会议由评选委员会主任刘丛强院士主持。

本次共评选出 18 名获奖人，经网上公示（公示时间：2016-04-14 至 2016-04-25）无异议，评选结果生效。现将评选结果公告如下（以姓氏拼音为序）。

丛志远，男，1977 年 9 月生，中国科学院青藏高原研究所副研究员，博士。请奖项目：青藏高原大气气溶胶地球化学表征。

与请奖项目有关的主要学术成就及创新点：①利用分子标志物的指示作用，揭示了南亚大气污染物向青藏高原的传输过程；②通过湖泊沉积物重建了过去 150 年间大气黑碳的历史变化；③明确了青藏高原气溶胶中痕量元素浓度水平及 Pb 同位素组成特征；④针对雪冰介质的特点，开发了有机酸标志物的前处理方法。

五篇代表性论著：

1. Cong, Z.Y., Kang, S.C., Kawamura, K., Liu, B., Wan, X., Wang, Z.Y., Gao, S.P., Fu, P.Q.,2015. Carbonaceous aerosols on the south edge of the Tibetan Plateau: concentrations, seasonality and sources. Atmospheric Chemistry and Physics 15, 1573-1584.
2. Cong, Z.Y., Kawamura, K., Kang, S.C., Fu, P.Q., 2015. Penetration of biomass-burning emissions from South Asia through the Himalayas: new insights from atmospheric organic acids. Scientific Reports 5, 9580 (Highlighted by Nature).
3. Cong, Z.Y., Kang, S.C., Zhang, Y.L., Gao, S.P., Wang, Z.Y., Liu, B., Wan, X., 2015. New insights into trace element wet deposition in the Himalayas: amounts, seasonal patterns, and implications. Environmental Science and Pollution Research 22, 2735-2744.
4. Cong, Z.Y., Kang, S.C., Gao, S.P., Zhang, Y.L., Li, Q., Kawamura, K., 2013. Historical trends of atmospheric black carbon on Tibetan Plateau as reconstructed from a 150-year lake sediment record. Environmental Science & Technology 47, 2579-2586.
5. Cong, Z.Y., Kang, S.C., Luo, C.L., Li, Q., Huang, J., Gao, S.P., and Li X.D., 2011. Trace elements and lead isotopic composition of PM10 in Lhasa, Tibet. Atmospheric Environment 45, 6210-6215.

侯　通，男，1984 年 5 月生，中国地质大学（北京）副教授，博士。请奖项目：中基性岩浆系统铁矿成因研究

与请奖项目有关的主要学术成就及创新点：　①揭示了攀西地区巨量富集钒钛磁铁矿的成因——主要与深部存在俯冲成因的榴辉岩有关；②对含矿闪长玢岩斑晶的研究发现铁元素在岩浆演化过程中均存在突然降低的现象，从而为玢岩铁矿矿浆成因提供了关键的矿物学证据；③证明铁质玄武岩-安山岩体系中存在高温液态不混溶作用，其发生的温度和成分范围超过了以往的认知，为理解岩石和矿石成因提供了重要的实验证据。

五篇代表性论著：

1. Tong Hou, Zhaochong Zhang, Jakob K. Keiding, Ilya V. Veksler. (2015): Petrogenesis of the Ultrapotassic Fanshan Intrusion in the North China Craton: Implications for Lithospheric Mantle Metasomatism and the Origin of Apatite Ores. Journal of Petrology 56(5), 893-918.
2. Tong Hou, Ilya V. Veksler. (2015): Experimental confirmation of high-temperature silicate liquid immiscibility in multicomponent ferrobasaltic systems. American Mineralogist 100, 1304-1307.
3. Tong Hou, Zhaochong Zhang, John Encarnacion, M. Santosh, Yali Sun, (2013): The role of recycled oceanic crust in magmatism and metallogeny: Os-Sr-Nd isotopes, U-Pb geochronology and geochemistry of picritic dykes in the Panzhihua giant Fe-Ti oxide deposit, central Emeishan large igneous province, SW China. Contributions to Mineralogy and Petrology 165, 805-822.
4. Tong Hou, Zhaochong Zhang, Xianren Ye, John Encarnacion, Marc K. Reichow, (2011): Noble gas isotopic systematics of Fe-Ti-V oxide ore-related mafic-ultramafic layered intrusions in the Panxi area, China: The role of recycled oceanic crust in their petrogenesis. Geochimica et Cosmochimica Acta 75, 6727-6741.
5. Tong Hou, Zhaochong Zhang, John Encarnacion, Yangsong Du, Zhidan Zhao, Junlai Liu, (2010): Geochemistry of Late Mesozoic dioritic porphyries associated with Kiruna-style and stratabound carbonate-hosted Zhonggu iron ores, Middle–Lower Yangtze Valley, Eastern China: Constraints on petrogenesis and iron sources. Lithos 119, 330-344.

惠鹤九，男，1977 年 11 月生，南京大学教授，博士。请奖项目：硅酸盐矿物和熔体中水的研究

与请奖项目有关的主要学术成就及创新点：①首次证实早期月球含水，这对普遍接受的月球碰撞成因理论提出了挑战；②提出一个能用于计算无水和含水天然硅酸盐熔体黏度的普适模型；③研究高压下流纹岩熔体中水组分间的化学反应动力学，并建立目前唯一一个可以在高压、高黏度区间测量含水熔体黏度的方法；④测量坦桑尼亚克拉通边缘 Labait 地幔包体中名义上无水矿物中的水，研究了地幔柱和克拉通之间的相互作用。

五篇代表性论著：

1. Hejiu Hui, Anne H. Peslier, Roberta L. Rudnick, Antonio Simonetti, Clive R. 2015. Neal, Plume-cratonic lithosphere interaction recorded by water and other trace elements in peridotite xenoliths from the Labait volcano, Tanzania, Geochemistry Geophysics Geosystems 16 (6): 1687-1710
2. Hejiu Hui, Anne H. Peslier, Youxue Zhang, Clive R. 2013. Neal, Water in lunar anorthosites and evidence for a wet early Moon, Nature Geoscience 6 (3): 177-180
3. Hejiu Hui, Youxue Zhang, Zhengjiu Xu, Piero Del Gaudio, Harald Behrens. 2009. Pressure dependence of viscosity of rhyolitic melts, Geochimica et Cosmochimica Acta 73 (12): 3680-3693
4. Hejiu Hui, Youxue Zhang, Zhengjiu Xu, Harald Behrens. 2008. Pressure dependence of the speciation of dissolved water in rhyolitic melts, Geochimica et Cosmochimica Acta 72 (13): 3229-3240
5. Hejiu Hui, Youxue Zhang. 2007. Toward a general viscosity equation for natural anhydrous and hydrous silicate melts, Geochimica et Cosmochimica Acta 71 (2): 403-416

李　杰，男，1977 年 2 月生，中国科学院广州地球化学研究所，高级工程师，博士。请奖项目：Re-Os 同位素地球化学分析技术与应用。

与请奖项目有关的主要学术成就及创新点：①建立了分析精度和质量处于国际水平的超低含量地质样品的 Re-Os 同位素分析技术。②发展了同一份地质样品的 Re-Os 同位素和铂族元素（PGE）联合分析方法，并利用该方法对地质标样的 Re-Os 同位素和 PGE 元素进行定值。③针对 Re 和 Os 在各类地质样品中的复杂而特殊的赋存形式，研发了适合不同地质样品的 Re-Os 同位素分析技术。④在上述一系列 Re-Os 同位素分析方法创新的基础上，应用 Re-Os 同位素揭示了全岩 Os 同位素不平衡现象和峨眉山大火成岩省地幔源区的不均一性。

五篇代表性论著：

1. Li J, Wang XC, Xu JF, Xu YG, Tang GJ, Wang Q. 2015. Disequilibrium-induced initial Os isotopic heterogeneity in gram aliquots of single basaltic rock powders: Implications for dating and source tracing. Chemical Geology 406:10-17.
2. Li J, Zhao PP, Liu JG, Wang XC, Yang Y, Wang GQ, Xu JF. 2015. Reassessment of hydrofluoric acid desilicification in the Carius tube digestion technique for Re-Os isotopic analysis in geological samples. Geostandards and Geoanalytical Research 39(1): 17-30.
3. Li J, Jiang XY, Xu JF, Zhong LF, Wang XC, Wang GQ, Zhao PP. 2014. Determination of Platinum-Group Elements and Re-Os Isotopes using ID-ICP-MS and N-TIMS from a Single Digestion after Two-Stage Column Separation. Geostandards and Geoanalytical Research 38(1): 37-50.
4. Li J, Xu JF, Suzuki K, He B, Xu YG, Ren ZY. 2010. Os, Nd, Sr isotope and trace elements geochemistry of Muli picrites: Insight into magmatic source of the Permian Emeishan LIP. Lithos 119: 108-122.
5. Li J, Zhong LF, Tu XL, Liang XR, Xu JF. 2010. Determination of rhenium content in molybdenite by ICP-MS after separation of the major matrix by solvent extraction with N-benzoyl-N-phenylhydroxalamine. Talanta 81: 954-958.

刘　娟，女，1978 年 12 月生，北京大学，研究员，博士。请奖项目：纳米矿物界面非生物/生物效应。

与请奖项目有关的主要学术成就及其创新点：①从原子尺度揭示纳米矿物粒径、结晶习性、团聚状态与溶解作用的机理。②建立纳米矿物的氧化-还原电势与其反应活性的相关性。③纳米磁铁矿-铁氧化菌界面电子传递的分子机制。

五篇代表性论著：

1. Liu J*, Aruguete D, Murayama M, and Hochella MF, Jr., 2009, Influence of Size and Aggregation on the Reactivity of an Environmentally and Industrially Relevant Nanomaterial (PbS). Environmental Science & Technology, 43 (21), 8178–8183.
2. Liu J*, Aruguete D, Jinschek JR, Rimstidt JR, and Hochella MF, Jr., 2008, The non-oxidative dissolution of galena nanocrystals: Insights into mineral dissolution rates as a function of grain size, shape, and aggregation state. Geochimica et Cosmochimica Acta. 72 (24): 5984-5996.
3. Liu J, Pearce CI, Qafoku O, Rosso KM, Arenholz E, Heald SM, and Peretyazhko TS, 2012, Tc(VII) reduction kinetics by titanomagnetite ($Fe_{3-x}Ti_xO_4$) nanoparticles. Geochimica et Cosmochimica Acta, 92: 67-81.
4. Liu J*, Pearce CI, Liu C, Wang Z, Shi L, Arenholz E, and Rosso KM, 2013, $Fe_{3-x}Ti_xO_4$ Nanoparticles as Tunable Probes of Microbial Metal Oxidation. Journal of the American Chemical Society, 135(24):8896-8907.

5. Sheng A, Liu F, Xie N, and Liu J*, 2016, Impact of Proteins on Aggregation Kinetics and Adsorption Ability of Hematite Nanoparticles in Aqueous Dispersions, Environmental Science & Technology, 50: 2228-2235..

龙晓平，男，1979 年 2 月生，西北大学教授，博士。请奖项目：大陆地壳的形成与演化过程。

与请奖项目有关的主要学术成就及创新点：①揭示了塔里木克拉通型大陆地壳的形成过程。②揭示了塔里木克拉通型大陆地壳的生长和再造过程。③揭示了中亚增生造山带型大陆地壳的侧向增生过程及机制。

五篇代表性论著：

1. Long X.P., Yuan C., Sun M., Zhao G.C., Xiao W.J., Wang Y.J., Yang Y.H, Hu A.Q., 2010. Archean Crustal Evolution of the Northern Tarim Craton, NW China: Zircon U-Pb and Hf Isotopic Constraints. Precambrian Research, 180, 272–284.
2. Long, X.P., Wilde, S.A., Wang, Q., Yuan, C., Wang, X.-C., Li, J., Jiang, Z.Q., Dan, W., 2015. Partial melting of thickened continental crust in central Tibet: evidence from geochemistry and geochronology of Eocene adakitic rhyolites in the northern Qiangtang Terrane. Earth and Planetary Science Letters 414, 30–44.
3. Long X.P., Yuan C., Sun M., Kröner A., Zhao G.C., Wilde S., Hu A.Q., 2011. Reworking of the Tarim Craton by underplating of mantle plume-derived magmas: evidence from Neoproterozoic granitoids in the Kuluketage area, NW China. Precambrian Research, 187, 1–14.
4. Long X.P., Sun M., Yuan C., Xiao W.J., Lin S.F., Wu F.Y., Xia X.P., Cai K.D., 2007. U–Pb and Hf isotopic study of zircons from metasedimentary rocks in the Chinese Altai: Implications for Early Paleozoic tectonic evolution. Tectonics, 26, TC5015, doi:10.1029/2007TC002128.
5. Long X.P., Yuan C., Sun M., Safonova I., Xiao W.J., Wang Y.J. 2012. Geochemistry and U–Pb detrital zircon dating of Paleozoic graywackes in East Junggar, NW China: Insights into subduction-accretion processes in the southern Central Asian Orogenic Belt. Gondwana Research, 21, 637-653.

倪怀玮，男，1981 年 11 月生，中国科学技术大学教授，博士。请奖项目：硅酸盐熔体的迁移性质。

与请奖项目有关的主要学术成就及创新点：①含水硅酸盐熔体电导率的测定和应用，促进了对软流圈低速带低速高导现象和活动岩浆房状态的认识。②水在硅酸盐熔体中的扩散系数的实验研究和理论模型，为模拟气驱火山喷发动力学提供了关键参数。

五篇代表性论著：

1. Ni H.W., Hui H., Steinle-Neumann (2015) Transport properties of silicate melts.Reviews of Geophysics, 53, 715-744.
2. Ni H.W., Keppler H., Behrens H. (2011) Electrical conductivity of hydrous basalticmelts: implications for partial melting in the upper mantle. Contributions to Mineralogy and Petrology, 162, 637-650.
3. Ni H.W., *Zhang Y. (2008) H2O diffusion models in rhyolitic melt with new high pressure data. Chemical Geology, 250, 68-78.
4. Ni H.W., Xu Z., Zhang Y. (2013) Hydroxyl and molecular H2O diffusivity in a haploandesitic melt. Geochimica et Cosmochimica Acta, 103, 36-48.
5. Guo X., Zhang L., Behrens H., *Ni H.W. (2016) Probing the status of felsic magma reservoirs: constraints from the P-T-H2O dependences of electrical conductivity of rhyolitic melt. Earth and Planetary Science Letters, 433, 54-62

苏本勋，男，1982 年 8 月生，中国科学院地质与地球物理研究所研究员，博士。请奖项目：镁铁-超镁铁岩的成岩成矿作用。

与请奖项目有关的主要学术成就与创新点：①通过地幔捕掳体研究揭示了西秦岭层状岩石圈地幔结构及碳酸盐交代作用，在汉诺坝首次发现假蓝宝石并厘定了幔源假蓝宝石成因。②揭示了地幔交代作用中 Li 同位素的地球化学行为，研发了斜方辉石、单斜辉石和橄榄石的 Li 同位素标样。③揭示出东天山-北山早二叠世镁铁-超镁铁岩的造山后伸展与地幔柱叠置成因及造山带岩体的铜镍成矿作用，在东天山首次发现阿拉斯加型岩体。

五篇代表性论著：

1. Su, B.X., Gu, X.Y., Deloule, E., Zhang, H.F., Li, Q.L., Li, X.H., Vigier, N., Tang, Y.J., Tang, G.Q., Liu, Y., Brewer, A., Mao, Q., Ma, Y.G., 2015. Potential orthopyroxene, clinopyroxene and olivine reference materials for in situ lithium isotope determination. Geostandards and Geoanalytical Research 39, 357-369.
2. Su, B.X., Teng, F.Z., Hu, Y., Shi, R.D., Zhou, M.F., Zhu, B., Liu, F., Gong, X.H., Huang, Q.S., Xiao, Y., Chen, C., He, Y.S., 2015. Iron and magnesium isotope fractionation in oceanic lithosphere and sub-arc mantle: perspectives from ophiolites. Earth and Planetary Science Letters 430, 523-532.
3. Su, B.X., Qin, K.Z., Tang, D.M., Sakyi, P.A., Liu, P.P., Sun, H., Xiao, Q.H., 2013. Late Paleozoic mafic-ultramafic intrusions in southern Central Asian Orogenic Belt (NW China): insight into magmatic Ni-Cu sulfide mineralization in orogenic setting. Ore Geology Reviews 51, 57-73.

4. Su, B.X., Qin, K.Z., Sakyi, P.A., Li, X.H., Yang, Y.H., Sun, H., Tang, D.M., Liu, P.P., Xiao, Q.H., Malaviarachchi, S.P.K., 2011. U-Pb ages and Hf-O isotopes of zircons from Late Paleozoic mafic-ultramafic units in southern Central Asian Orogenic Belt: tectonic implications and evidence for an Early-Permian mantle plume. Gondwana Research 20, 516-531.
5. Su, B.X., Zhang, H.F., Sakyi, P.A., Yang, Y.H., Ying, J.F., Tang, Y.J., Qin, K.Z., Xiao, Y., Zhao, X.M., Mao, Q., Ma, Y.G., 2011. The origin of spongy texture of mantle xenolith minerals from the Western Qinling, Central China. Contributions to Mineralogy and Petrology 161, 465-482.

汪福顺，男，1976 年 4 月生，上海大学教授，博士。请奖项目：河流拦截蓄水的环境影响。

与请奖项目有关的主要学术成就及创新点：①更新了国际上对水库温室气体释放的认识；提出了高坝大库温室气体释放的研究方法和评估要点；建立了一套适合水库温室气体大面观测的走航式连续观测系统。首次对我国全流域梯级开发的河流进行了梯级水库二氧化碳释放进行了全面评估，做出了不支持国际上在热带地区水库进行的结论；提出了我国亚热带水库的温室气体释放特点，并建立了水库温室气体释放的滞留时间模式。②研究了大规模梯级筑坝对河流中以硅为主线的营养盐的拦截效应。③首次估算了长江流域水面的 CO_2 释放通量，提出了自然水体也是大气温室气体重要来源的观点。④用碳、氮稳定同位素及放射性同位素定年技术，揭示了滇池水体富营养化演变的发生、发展过程，反演了污染物入湖历史及主要来源；发展了氮稳定同位素技术在研究水体富营养化中的应用。

五篇代表性论著：

1. Fushun Wang*, Man Cao, Baoli Wang, et al., Seasonal variation of CO2 diffusion flux from a large subtropical reservoir in East China. Atmospheric Environment. 2015,103: 129-137.
2. Guo, JH. Wang, FS. Vogt,RD et al. Anthropogenically enhanced chemical weathering and carbon evasion in the Yangtze Basin. Scientific Reports. 5, 11941; doi: 10.1038/srep11941 (2015).
3. Fushun Wang, et al. Carbon dioxide emission from surface water in cascade reservoir- river system on the Maotiao River, southwest of China. Atmospheric Environment. 2011, 45: 3827-3834.
4. Fushun Wang, et al. Dissolved silicate retention and transport in cascade reservoirs in Karst area, Southwest China. Science of total environment. 2010, 408(7):1667-1675.
5. FuShun Wang, et al. Stable Isotopes in Sedimentary Organic Matter from Lake Dianchi and their Indication of Eutrophication History. Water Air Soil Pollut. 2009,199: 159-170.

王孝磊，男，1979 年 6 月生，南京大学教授，博士。请奖项目：华南前寒武纪构造-岩浆演化和花岗岩成因。

与请奖项目有关的主要学术成就与创新点：①理清了江南造山带的构造-岩浆演化过程，明确其在全球新元古代构造演化中的意义。系统厘定了江南造山带内不整合面之下“褶皱基底”地层的时代，论证了江南造山带从“碰撞后”到“造山后”不同阶段岩浆作用的表现，所提出的江南造山带构造-岩浆演化模式较好地解释了扬子地块东南缘新元古代岩浆作用的地球动力学过程。②通过矿物微区原位分析技术，识别出源区过程和熔融机制对于花岗岩形成的制约因素，提供了花岗岩浆熔体成分变化的 Hf-O 同位素证据，对过渡型花岗岩的成因给出了合理的解释；首次在国际上提出源区“锆石效应”和地壳的不平衡熔融可能是造成花岗岩锆石 Hf 同位素变化的主要原因；对放射性损伤在锆石原位元素和同位素分析上进行了全面的评估。

五篇代表性论著：

1. Wang XL*, Zhou JC, Wan YS, Kitajima K, Wang D, Bonamici C, Qiu JS, Sun T, Magmatic evolution and crustal recycling for Neoproterozoic strongly peraluminous granitoids from southern China: Hf and O isotopes in zircon. Earth and Planetary Science Letters 366, 71–82 (2013).
2. Wang XL*, Zhou JC, Griffin WL, Zhao GC, Yu JH, Qiu JS, Zhang YJ, Xing GF, Understanding the contrasting geochemical features of the crust in the Jiangnan Orogen. Precambrian Research 242, 154-171 (2014).
3. Wang XL*, Coble MA, Valley JW, Shu XJ, Kitajima K., Spicuzza M.J., Sun T., Influence of radiation damage on Late Jurassic zircons from southern China: evidence from in situ measurements of oxygen isotopes, laser Raman, U-Pb ages, and trace elements. Chemical Geology 389, 122-136, (2014).
4. Tang M, Wang XL*, Shu XJ, Yang T, Wang D, Gopon P, Hafnium isotopic heterogeneity in zircons from granitic rocks: geochemical evaluation and modeling of "zircon effect" in crustal anatexis. Earth and Planetary Science Letters 389, 188-199 (2014).
5. Xing GF*, Wang XL*, Wan YS, Chen ZH, Jiang Y, Kitajima K, Ushikubo T, Gopon P, Diversity in early crustal evolution: 4100 Ma zircons in the Cathaysia Block of southern China. Scientific Reports 4, 5143, (2014).

吴怀春，男，1977 年 12 月生，中国地质大学（北京）教授，博士。请奖项目：米兰科维奇沉积旋回与高精度天文地质年代。

与请奖项目有关的主要学术成就与创新点：①确定出地球轨道参数深刻地影响着二叠纪气候和沉积过程；建立了中二叠世罗德阶－三叠纪印度阶天文年代标尺，完成中二叠世-早三叠世牙形石带、生物大灭绝和重大地质事件年龄及持续时间的高精度年代标定，确定出煤山剖面二叠纪末期生物大灭绝事件持续时间为~8.3 万年，稳定碳同位素急剧负偏持续时间为~1.5 万年。②在松辽盆地及辽西的陆相白垩系识别出完整的米兰科维奇沉积旋回，证明了地球轨道力深刻地影响着温室条件下陆地环境的气候变化和沉积过程；建立了“松科 1 井”持续时间长达 28 Ma 的长偏心率天文年代标尺，完善了松辽盆地上白垩统高精度年代格架及其与海相地层的对比方案。③建立了中国南海北部中新世以来完整的地磁极性年代格架。

五篇代表性论著：

1. Wu Huaichun, Zhang Shihong, Hinnov Linda, Jiang Ganqing, Yang Tianshui, Li Haiyan, Wan Xiaoqiao, Wang Chengshan. Cyclostratigraphy and orbital tuning of the terrestrial upper Santonian-Lower Danian in Songliao Basin, northeastern China. Earth and Planetary Science Letters, 2014, 407: 82-95.
2. Wu Huaichun, Zhao Xixi, Shi Meinan, Zhang Shihong, Li Haiyan, Yang Tianshui. A 23 Myr magnetostratigraphic time framework for Site 1148, ODP Leg 184 in South China Sea and its geological implications. Marine and Petroleum Geology, 2014, 58: 749-759.
3. Wu Huaichun, Zhang Shihong, Hinnov Linda, Feng Qinglai, Jiang Ganqing, Li Haiyan, Yang Tianshui. Time-calibrated Milankovitch cycles for the late Permian. Nature Communications, 2013, 4: 2452. doi: 10.1038/ncomms3452.
4. Wu Huaichun, Zhang Shihong, Jiang Ganqing, Yang Tianshui, Guo Junhua, Li Haiyan. Astrochronology for the Early Cretaceous Jehol Biota in Northeastern China. Palaeogeography, Palaeoclimatology, Palaeoecology, 2013, 385: 221-228.
5. Wu Huaichun, Zhang Shihong, Jiang Ganqing, Hinnov Linda, Yang Tianshui, Li Haiyan, Wan Xiaoqiao, Wang Chengshan. Astrochronology of the Early Turonian–Early Campanian terrestrial succession in Songliao Basin, northeastern China and its implication for the long-period behavior of the Solar System. Palaeogeography, Palaeoclimatology, Palaeoecology, 2013, 385: 55-70.

杨　蔚，男，1981 年 2 月生。中国科学院地质与地球物理研究所研究员，博士。请奖项目：华北橄榄岩、麻粒岩和玄武岩的 Mg 同位素研究。

与请奖项目有关的主要学术成就与创新点：①对华北地幔橄榄岩、麻粒岩和玄武岩的镁同位素研究，揭示了地幔和深部地壳的平均 Mg 同位素组成，发现了 Mg 同位素示踪再循环碳酸盐岩的应用潜力。②通过对辽西地区中生代火山岩系统的年代学和地球化学研究，建立了该区域火山岩年代学格架和地球化学演化特征，对华北克拉通中生代减薄的时间和机制提供了重要制约。③研发纳米离子探针方法。参与建立国内首个纳米离子探针实验室，开发小区域锆石定年和微量元素成像方法，将 U-Pb 定年的空间分辨提升到 5μm，Pb-Pb 定年提升到 2μm，微量元素分析的空间分辨提升到 800nm～3μm，为微细锆石和复杂环带锆石的定年和微量元素分析提供有力的技术支持。

五篇代表性论著：

1. Yang, W., Lin, Y., Hao, J., Zhang, J., Hu, S., Ni, H., 2016. Phosphorus‐controlled trace element distribution in zircon revealed by NanoSIMS. Contribution to Mineralogy and Petrology, 171:28. doi:10.1007/s00410-016-1242-z
2. Yang, W., Teng, F.-Z., Li, W.-Y., Liu, S.-A., Ke, S., Liu, Y.-S., Zhang, H.-F., Gao, S., 2016. Magnesium isotopic composition of the deep continental crust. American Mineralogist, 101(2): 243-252.
3. Yang, W., Hu, S., Zhang, J., Hao, J., Lin, Y., 2015. NanoSIMS analytical technique and its applications in earth sciences. Science China Earth Sciences 58(10): 1758-1767.
4. Yang, W., Lin, Y.-T., Zhang, J.-C., Hao, J.-L., Shen, W.-J., Hu, S., 2012. Precise micrometre-sized Pb-Pb and U-Pb dating with NanoSIMS. Journal of Analytical Atomic Spectrometry 27, 479-487.
5. Yang, W., Teng, F.-Z., Zhang, H.-F., Li, S.-G., 2012. Magnesium isotopic systematics of continental basalts from the North China craton: Implications for tracing subducted carbonate in the mantle. Chemical Geology 328, 185-194..

杨　燕，女，1979 年 10 月生，浙江大学副教授，博士。请奖项目：地球深部矿物中水的行为及其对热力学性质的影响。

与请奖项目有关的主要学术成就与创新点：①通过对地球深部矿物（单斜辉石、斜方辉石、长石和金红石）进行原位变温红外光谱分析，研究了不同温度下矿物中缺陷OH的行为，从一个新的角度揭示了名义上无水矿物中结构水的结合机理。②通过对深部矿物（橄榄石和长石）的高温拉曼光谱分析，发现了矿物中的水能够显著影响其热力学性质，为认识深部地球的真实状态提供了新的依据。

五篇代表性论著：

1. Yang Y, Xia QK, Feng M, Zhang PP. Temperature dependence of IR absorption of OH species in clinopyroxene. American Mineralogist 2010, 95, 1439-1443
2. Yang Y, Xia QK, Feng M, Gu XY. In situ FTIR investigations at varying temperatures on hydrous components in rutile. American Mineralogist 2011, 96, 1851-1855
3. Yang Y, Xia QK, Feng M, Liu SC. OH in nature orthopyroxene: an in situ FTIR investigation at varying temperatures. Physics and Chemistry of Minerals 2012, 39, 413-418
4. Yang Y, Wang ZP, Smyth JR, Liu J, Xia QK. Water effects on the anharmonic properties of forsterite. American Mineralogist 2015, 100, 2185-2190
5. Yang Y, Xia QK, Zhang PP. Evolutions of OH groups in diopside and feldspars with temperature. European Journal of Mineralogy 2015, 27, 185-192.

杨　智，男，1980 年 2 月生，中国石油勘探开发研究院高级工程师，博士。请奖项目：我国非常规致密油气基础理论研究。

与请奖项目有关的主要学术成就与创新点：①深入研究了我国重点盆地非常规致密油气资源，总结了 10 项基本特征和 2 项关键标志，明确了大面积连续型油气聚集是非常规致密油气的标志特征，为规模勘探开发致密油气资源奠定了理论基础。②通过多手段方法研究非常规致密储层油气充注下限，建立了不同储层孔喉直径油气聚集模式，取得创新性成果认识。③研究鄂尔多斯盆地致密油气聚集机理，取得重要进展。

五篇代表性论著：

1. Yang Zhi*, Hou Lianhua, Tao Shizhen, et al. Formation condition and “sweet spot” evaluation of tight oil and shale oil[J]. PETROL. EXPLOR. DEVELOP., 2015, 42(5): 556.
2. Yang Zhi*, He Sheng, Guo Xiaowen, et al. Formation of low permeability reservoirs and gas accumulation process in the Daniudi Gas Field, Northeast Ordos Basin, China[J]. Journal of Marine and Petroleum Geology, 2016, 70(2): 222-236.
3. Yang Zhi, Zou Caineng, He Sheng, et al. Formation mechanism of carbonate cemented zones adjacent to the top overpressured surface in the central Junggar Basin,NW China[J]. SCIENCE CHINA: Earth Sciences, 2010, 53(4): 529-540.
4. C. N. Zou, Z. Yang*, S.Z. Tao, et al. Continuous Hydrocarbon Accumulation in a Large Area as a Distinguishing Characteristic of Unconventional Petroleum: the Ordos Basin, North-Central China[J]. Earth-Science Reviews, 2013, 126: 358-369. (SCI 收录，影响因子 7.885)
5. Zou Caineng, Yang Zhi*, Dai Jinxing, et al. The characteristics and significance of conventional and unconventional Sinian-Silurian gas systems in the Sichuan Basin, Central China[J]. Journal of Marine and Petroleum Geology, 2015.

袁顺达，男，1980 年 10 月生，中国地质科学院矿产资源研究所副研究员，博士。请奖项目：热液金属矿床成矿作用。

与请奖项目有关的主要学术成就与创新点：①较早在我国建立了单颗粒锡石 ID-TIMS U-Pb 定年和锡石 LA-MC-ICP-MS U-Pb 定年的方法。②通过对南岭地区钨锡多金属成矿带时空结构的研究，明确了南岭地区存在晚白垩世锡成矿事件。③通过系统的岩石地球化学、年代学及矿床学的研究，明确湘南钨、铜成矿差异机制。④在国内率先利用石英毛细管合成流体包裹体技术，原位观测硫酸盐热还原反应（TSR）过程。

五篇代表性论著：

1. Zhao Panlao, Yuan Shunda*, Mao Jingwen, Santosh M., Li Chao, Hou Kejun. 2016.Geochronological and petrogeochemical constraints on the skarn deposits in Tongshanling ore district, southern Hunan Province: Implications for Jurassic Cu and W metallogenic events in South China. Ore Geology Reviews (DOI: 10.1016/j.oregeorev.2016.03.004)(Corresponding author).
2. Yuan Shunda, Mao Jingwen, Cook Nigel J., Wang Xudong, Liu Xiaofei, Yuan Yabin. 2015. A Late Cretaceous tin metallogenic events in Nanling W-Sn metallogenic province: Constraints from U-Pb, Ar-Ar geochronology at the Jiepailing Sn-Be-F deposit, Hunan, China. Ore Geology Reviews, 65: 283-293.
3. Yuan Shunda, Chou I-Ming, Burruss Robert C., Wang Xiaolin, Li Jiankang. 2013. Disproportionation and thermochemical sulfate reduction reactions in S-H2O-CH4 and S-D2O-CH4 systems from 200 to 340 ℃ at elevated pressures. Geochimica et Cosmochimica Acta, 118:263-275 (SCI).
4. Yuan Shunda, Peng Jiantang, Hao Shuang, Li H M, Geng J Z, Zhang D L. 2011. In situ LA-MC-ICP-MS and ID-TIMS U-Pb geochronology of cassiterite in the giant Furong tin deposit, Hunan Province, South China: New constraints on the timing of tin–polymetallic mineralization. Ore Geology Reviews, 43(1): 235–242(SCI).

5. Yuan Shunda, Peng Jiantang, Hu Ruizhong, Li Houmin, Shen Nengping, Zhang Dongliang. 2008. A precise U–Pb ages on cassiterite from the Xianghualing tin–polymetallic deposit (Hunan, South China). Mineralium Deposita, 43: 385–372 (SCI).

张宝华，男，1978 年 9 月生，中国科学院地球化学研究所研究员，博士。请奖项目：地幔矿物的电性与扩散性研究。

与请奖项目有关的主要学术成就与创新点：①在上地幔低速高导层的成因方面，通过实验证明了矿物含水和含碳假说不能解释上地幔的高导异常。②率先在国际上建立了剪切变形下测量部分熔融岩石电导率的新方法，提出了剪切变形下部分熔融是高导层的形成机制的新认识。③对地幔深部可能存在的导电机制提出了新的观点和认识，为大地电磁建立精细的电导率-深度剖面和推断下地幔的物质组成提供了有效约束。④首次将凝聚态物理学中的一个热力学理论模型（cBΩ model）成功应用到地学领域，发展并提出了地幔矿物中不同元素、不同类型扩散系数的有效计算方法。

五篇代表性论著：

1. Zhang B.H., Shan S.M., Wu X.P., 2016. Modeling H, Na, and K diffusion in plagioclase feldspar by relating point defect parameters to bulk properties. Physics and Chemistry of Minerals, 43, 151-159.
2. Zhang B.H., Shan S.M., 2015. Application of the cBΩ model to the calculation of diffusion parameters of Si in silicates. Geochemistry Geophysics Geosystems, 16, 705-718.
3. Zhang B.H., Yoshino T., Yamazaki D., Manthilake G., Katsura T., 2014. Electrical conductivity anisotropy of partially molten peridotite under shear deformation. Earth and Planetary Science Letters, 405, 98-109.
4. Zhang B.H., Yoshino T., Wu X.P., Matsuzaki T., Shan S.M., Katsura T., 2012. Electrical conductivity of enstatite as a function of water content: Implications for the electrical structure in the upper mantle. Earth and Planetary Science Letters, 357-358, 11-20.
5. Zhang B.H., Wu X.P., Zhou R.L., 2011. Calculation of oxygen self-diffusion coefficients in Mg_2SiO_4 polymorphs and $MgSiO_3$ perovskite based on the compensation law. Solid State Ionics, 186(1), 20-28.

张　华，男，1981 年 9 月生，中国科学院地球化学研究所研究员，博士。请奖项目：汞硒生物地球化学循环、相互作用及风险评估。

与请奖项目有关的主要学术成就与创新点：①将硒汞研究领域从水生生态系统扩展到陆地生态系统。②发现了“山地汞诱捕效应”新现象并提出了理论解释模型。③打破了国际传统认识，揭示了我国内陆居民甲基汞暴露主要途径是食用稻米而非鱼类。④建立了人体硒汞联合暴露健康风险评估 BRV 新方法。⑤揭示了水稻属于甲基汞超富集植物，丰富了国际上关于甲基汞放大效应主要发生在水生食物链的传统认识。⑥揭示了土壤硒对水稻汞富集的抑制作用及相关机理，为矿区土壤污染修复提供了重要技术支撑。⑦揭示了汞矿区地表河流系统汞-硒污染物的迁移机制并提出了污染防治建议。

五篇代表性论著：

1. Zhang H, Feng X, Larssen T, Qiu G, Vogt RD. In Inland China, Rice, rather than Fish is the Major Pathway for Methylmercury Exposure. Environ Health Perspect. 2010, 118(9). 1183-1189. [IF=7.980]
2. Zhang H, Feng X, Chan H.M., Larssen T. New Insights into Traditional Health Risk Assessments of Mercury Exposure: Implications of Selenium. Environ Sci & Technol. 2014, doi: 10.1021/es4051082. [IF=5.330]
3. Zhang H, Yin R, Feng X, Somma J, Anderson CWN, Sapkota A, Fu X, Larssen T, Atmospheric mercury inputs increase in montane soils with elevation: evidence from mercury isotope signatures. Scientific Reports. 2013, DOI:10.1038/srep03322. [IF=5.578]
4. Zhang H, Feng X, Larssen T, et al. Selenium in Soil Inhibits Mercury Uptake and Translocation in Rice (Oryza sativa L.). Environ Sci & Technol. 2012, 46, 10040–10046. [IF=5.330]
5. Zhang H, Feng X, Larssen T, Shang L, Li P. Bio-accumulation of Methylmercury versus Inorganic Mercury in Rice (Oryza sativa L.) Grain. Environ Sci & Technol. 2010, 44(12), 4499–4504.

朱润良，男，1979 年 8 月生，中国科学院广州地球化学研究所研究员，博士。请奖项目：黏土矿物-污染物的表/界面反应特性。

与请奖项目有关的主要学术成就与创新点：①将实验研究与分子模拟相结合，建立了黏土矿物层间域微观结构及其表/界面反应性研究的新方法。②揭示了水环境下黏土矿物层间域的微观结构特征，阐释了黏土矿物与有机分子的表/界面作用特征，丰富了黏土矿物吸附理论。③提出了黏土矿物结构修饰新方法，增强了黏土矿物的表界面反应活性。④提出了污染控制应用后废弃黏土矿物的处置及资源利用新方法。

五篇代表性论著：

1. Zhu, R.L., Chen, Q.Z., Zhou, Q., Xi, Y.F., Zhu, J.X., He, H.P., (2016) Adsorbents based on montmorillonite for contaminant removal from water: A review. Applied Clay Science, 123, 239–258.
2. Chen, Q.Z., Liu, H.M., Zhu, R.L.*, Wang, X., Wang, S.Y., Zhu, J.X., He, H.P., (2016) Facile synthesis of nitrogen and sulfur co-doped graphene-like carbon materials using methyl blue/montmorillonite composites. Microporous & Mesoporous Materials, 225, 137–143. （通讯作者）
3. Liu, J., Zhu, R.L.*, Xu, T.Y., Xu, Y., Ge, F., Zhu, J.X., He, H.P., (2016) Co-adsorption of phosphate and zinc(II) on the surface of ferrihydrite. Chemosphere, 144, 1148–1155. （通讯作者）
4. Xu, T.Y., Zhu, R.L.*, Zhu, J.X., Liang, X.L., Liu, Y., Xu, Y., He, H.P., (2016) Ag3PO4 immobilized on hydroxy-metal pillared montmorillonite for the visible-light-driven degradation of acid red 18. Catalysis Science & Technology. (In press, DOI: 10.1039/C5CY02129D) （通讯作者）
5. Laipan, M.W., Zhu, R.L.*, Zhu, J.X., Xi, Y.F., He, H.P., (2016) Visible light assisted Fenton-like degradation of Orange II on Ni3Fe/Fe3O4 magnetic catalyst prepared from spent FeNi layered double hydroxide. Journal of Molecular Catalysis A: Chemical, 415, 9–16. （通讯作者）.

评选委员会经过认真评审、讨论，以无记名投票方式产生了以上 18 名获奖者。全部获奖者均符合本奖的奖掖条件，产生过程符合本奖《实施办法》所规定的程序。

本奖的评选工作始终遵循办奖宗旨，遵循《实施办法》所规定的公平、公正和鼓励创新的原则。《侯德封奖》为发现人才、培养人才、推动学科发展发挥了重要作用，并得到了社会各界的广泛认同、赞赏与支持；我会将继续努力，为实现社会团体协助党和政府发展科学事业、促进出成果出人才，为建设创新型国家作出贡献。

上述 18 名获奖人，在矿物学、岩石学和地球化学研究领域做出了突出的创新性的贡献，是我国青年科学工作者的优秀代表；他们严谨求实、勇于探索创新的科学精神，他们报效祖国、服务社会的奉献精神，是值得提倡和学习的。