基本信息

姓　　名	邵会波
职　　务	
职　　称	教授/博导
学术兼职	
联系电话	
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系/研究所	物理化学

教育背景

1991.11-1995.12	莫斯科大学，电化学专业，副博士
1990.09-1991.11	中科院长春应用化学研究所，电分析化学专业，硕士研究生
1983.09-1987.07	东北师范大学，化学专业，学士

工作履历

2006.01-至今	北京理工大学，化学与化工学院，教授
2000.10- 2006.01	首都师范大学，化学系，研究员
1998.01- 2000.09	首都师范大学，化学系，副教授
1996.01-1997.12	北京大学，化学与分子工程学院，博士后
1987.10-1990.09	东北林业大学，化学系，助教

研究方向

1.	自组装膜电化学
2.	扫描电化学显微镜
3.	化学修饰电极
4.	电化学传感器

荣誉奖励

1.	教育部“高等学校骨干教师”（2002-2005）

2.	北京市（青年）学科带头人（2001-2005）
3.	北京市“科技新星”（1999-2004）
承担项目	
1.	作为项目负责人先后主持了国家、北京市自然科学基金，教育部的“优秀青年教师资助计划”和“高等学校骨干教师资助计划”，北京市“科技新星”培养计划等 10 项。
2.	目前作为项目负责人主持国家自然科学基金面上项目：扫描电化学显微镜方法研究自组装膜表面氢键协同作用，资助期限：2019.01-2022.12，直接经费 65 万。
研究成果	
已培养硕士 25 名，博士 10 名。目前在读硕士生 3 名、博士生 3 名。在电极表面的分子自组装膜构筑、表征及氢键电化学等电化学研究方面已发表 SCI 收录论文 61 篇。	
代表性论文	
1.	近 5 年来本组研究生为第一作者发表论文 27 篇： X. M. Huang, J. C. Chen, C. X. Yan, H. X. Guo, H. B. Shao*. Probing Charge Reversal of Zwitterion at Defects on Self-Assembled Monolayers by Scanning Electrochemical Microscopy. Journal of Physical Chemistry C, 2020, 124, 8876 - 8884.
2.	J. C. Chen, X. M. Huang, C. X. Yan, H. X. Guo, Z. M. Gao, H. B. Shao*. Controllable release of dopamine from simulated enzyme-containing biomembrane by biased potential. Analytica Chimica Acta, 2020, 1125, 135 - 143.
3.	J. C. Chen, X. M. Huang, X. T. Fang, C. X. Yan, Z. M. Gao, H. B. Shao*. Disassembly of intermolecular hydrogen bond induced by cations on self-assembled monolayer. Journal of Electroanalytical Chemistry, 2020, 876, 114476
4.	X. M. Huang, J. C. Chen, C. X. Yan, H. B. Shao*. Probing a Reversible Cationic Switch on a Mixed Self-Assembled Monolayer Using Scanning Electrochemical Microscopy. Langmuir, 2019, 35, 10772 - 10779.
5.	Q. Zheng, H. B. Shao*. Correlation between redox species adsorption and electron transfer kinetics of mildly oxidized graphene: A chronocoulometry and SECM study. Electrochemistry Communications, 2019,103, 83 - 87.

6.	X. M. Huang, J. C. Chen, X. T. Fang, C. X. Yan, H. B. Shao*. Exploring the enhancement of electron tunneling induced by intermolecular interactions on surface of self-assembled monolayer. Journal of Electroanalytical Chemistry, 2019, 837, 143 - 150.
7.	C. X. Yan, X. M. Huang, J. C. Chen, H. X. Guo, H. B. Shao*. Study on Preferential Solvation of Water by Electrochemical Method. Electroanalysis, 2019, 31, 1 - 9.
8.	X. M. Huang, Q. Zheng, X. T. Fang, H. B. Shao*. Probing Qualitative Change in Intermolecular Forces from Hydrogen Bonding to Electrostatic Interaction on the Surface of Self-Assembled Monolayer. Journal of The Electrochemical Society, 2018, 165 (5), H240 - H246.
9.	Q. Zheng, H. B. Shao*. Influence of intermolecular H-bonding on the acid-base interfacial properties of -COOH and ferrocene terminated SAM. Journal of Electroanalytical Chemistry, 2018, 829, 88 - 94.
10.	Y. Liang, F. Zhao, Z. H. Cheng, Y. X. Deng, Y. K. Xiao, H. H. Cheng, P. P. Zhang, Y. X. Huang, H. B. Shao*, L. T. Qu*. Electric power generation via asymmetric moisturizing of graphene oxide for flexible, printable and portable electronics. Energy &Environmental Science, 2018, 11, 1730 - 1735
11.	Y. Liang, F. Liu, Y. X. Deng, Q. H. Zhou, Z. H. Cheng, .P. P. Zhang, Y. K. Xiao, L. X. Lv, H. X. Liang, Q. Han,* H. B. Shao,* L. T. Qu*. A Cut-Resistant and Highly Restorable Graphene Foam. Small, 2018, 14, 1801916.
12.	L. Qi, H. H. Tian, H. B. Shao,* H. Z. Yu*. Host−Guest Interaction at Molecular Interfaces: Cucurbit[7]uril as a Sensitive Probe of Structural Heterogeneity in Ferrocenyl Self-Assembled Monolayers on Gold. Journal of Physical Chemistry C, 2018, 122, 15986 - 15985.
13.	Q. Zheng, X. M. Huang, Y. Liu, X. T. Fang, J. Zhang*, H. B. Shao*. Electrochemical Quantification of Intermolecular Hydrogen Bonding between Ferrocenemethanol and 3-Mercaptopropanoic Acid on Gold. Journal of Physical Chemistry C, 2017, 121(40), 22123 - 22129.
14.	L. Qi, H. H. Tian, H. B. Shao,* H. Z. Yu*. Host−Guest Interaction at Molecular Interfaces: Binding of Cucurbit[7]uril on Ferrocenyl Self-Assembled Monolayers on Gold. Journal of Physical Chemistry C, 2017, 121, 7985 - 7992.

15.	Q. Zheng, K. J. Ding, X. M. Huang, H. B. Shao*. Self-assembled monolayer assisted binding of partially oxidized graphene on gold: Tunable electron-transfer mediation and in-situ electrochemical disassembly. Applied Surface Science, 2017, 425, 188 - 193.
16.	Q. Zheng, J. Zhang, Y. F. Yang, X. F. Wang, K. J. Ding*, H. B. Shao*. Regulating the Intermolecular Hydrogen Bonding: The Reversible Assembly and Disassembly in the Diffusion Layer. Journal of The Electrochemical Society, 2017, 164 (2), H97 - H103.
17.	Y. Liang, F. Zhao, Z. H. Cheng, Q. H. Zhou, H. B. Shao*, L. Jiang, L. T. Qu*. Self-powered wearable graphene fiber for information expression. Nano Energy, 2017, 32, 329 - 335.
18.	Y. Jiang, C. G. Hu, H. H. Cheng, C. X. Li, T. Xu, Y. Zhao*, H. B. Shao*, L. T. Qu*. Spontaneous, Straightforward Fabrication of Partially Reduced Graphene Oxide−Polypyrrole Composite Films for Versatile Actuators. ACS Nano, 2016, 10, 4735 - 4741.
19.	Y. Y. Yan, Q. Zheng, Y. F. Yang, Y. Liu, H. B. Shao*. Regulating the Electrochemical Reversibility of Fe(CN)63-/4- by Altering the Surface Potential of the Compact Layer. Journal of The Electrochemical Society, 2016, 163 (10), H982 - H987.
20.	X. Li, Y. Jiang, B. Xu, L. T. Qu, Y. J. Shi, H. B. Shao*. Glucose Oxidase Immobilization by Volume Shrinkage of Graphene as "Door-Function" Microelectrode. Journal of The Electrochemical Society, 2016, 163, B169 - B175.
21.	Q. Zheng,Y. Y. F. Yang,Y. Yan, Y. Yu, Y. Liu, W. Y. Gao, K. J. Ding, H. B. Shao*. The long-range effect induced by untying hydrogen bonds for single cell test using SECM. Electrochimica Acta, 2016,207, 135 - 142.
22.	Y. Jiang, H. B. Shao, C. X. Li, T. Xu, Y. Zhao, G. Q. Shi, L. Jiang, L. T. Qu*. Versatile Graphene Oxide Putty-Like Material. Advanced Materials, 2016, 28, 10287 - 10292.
23.	Y. J. Shi, X. Li, M. H. Ye, C. G. Hu, H. B. Shao*, L. T. Qu*. A novel imperata cylindrical flowers-shaped porous graphene microelectrode for direct electrochemistry of glucose oxidase. Journal of The Electrochemical Society, 2015, 162 (7), B138 - B144.
24.	K. K. Hu, B. Xu, H. B. Shao*. Determination of hydrophobicity scale of tetraphenylborate and its

	derivatives by ferrocene based three-phase electrodes. Electrochemistry Communications, 2015, (50), 36 - 38.
25	D. B. Xiang, J. Noell, H. B. Shao*, G. Dupas, N. Merbouh*, H. Z. Yu*. Unique Intramolecular Electronic Communications in Monoferrocenylpyrimidine Derivatives: Correlation between Redox Properties and Structural Nature. Electrochimica Acta, 2015, 162, 31 - 35.
26	H. H. Tian, L. Qi, D. B. Xiang, H. B. Shao*, H. Z. Yu*. Homogenized redox behavior of electroactive self-assembled monolayers on gold in the organic phase. Electrochimica Acta, 2015, 170, 369 - 375.
27	H. H. Tian, Y. C. Li, H. B. Shao*, H. Z. Yu*. Thin-film voltammetry and its analytical applications: A review. Analytica Chimica Acta, 2015, 855, 1-12.