

DAFTAR PUSTAKA

- Akbari, E., Akbari, I., & Ebrahimi, M. R. (2019). sp 2/sp 3 bonding ratio dependence of the band-gap in graphene oxide. *European Physical Journal B*, 92(4).
- Anderson, A. D., Lanci, M. P., Buchanan, J. S., Dumesic, J. A., & Huber, G. W. (2021). The Hydrodeoxygenation of Glycerol over NiMoSx: Catalyst Stability and Activity at Hypopyrolysis Conditions. *ChemCatChem*, 13(1), 425–437.
- Ardila A, A. N., Arriola-Villaseñor, E., Barrera-Zapata, R., Hernández, J., & Fuentes, G. A. (2023). Kinetic Study of Liquid-Phase Glycerol Hydrodeoxygenation into 1,2-Propanediol over CuPd/TiO₂-Na. *ACS Omega*, 8(17), 14907–14914.
- Asano, T., Nakagawa, Y., Tamura, M., & Tomishige, K. (2019). Structure and Mechanism of Titania-Supported Platinum-Molybdenum Catalyst for Hydrodeoxygenation of 2-Furancarboxylic Acid to Valeric Acid. *ACS Sustainable Chemistry and Engineering*, 7(10), 9601–9612.
- Bansal, T., Mohite, A. D., Shah, H. M., Galande, C., Srivastava, A., Jasinski, J. B., Ajayan, P. M., & Alphenaar, B. W. (2012). New insights into the density of states of graphene oxide using capacitive photocurrent spectroscopy. *Carbon*, 50(3), 808–814.
- Bayat, R., Darabi, R., Coguplugil, Z. K., Akin, M., Bekmezci, M., Sen, F., & Karimi, F. (2023). Synthesis and applications of highly stable silane modified reduced graphene oxide supported cobalt based platinum nanoparticle for anodic part of direct methanol fuel cells. *International Journal of Hydrogen Energy*.
- Beck, A., Frey, H., Becker, M., Artiglia, L., Willinger, M. G., & Van Bokhoven, J. A. (2021). Influence of Hydrogen Pressure on the Structure of Platinum-Titania Catalysts. *Journal of Physical Chemistry C*, 125(41), 22531–22538.
- Belo Duarte, R., Corazza, M. L., Pimenta, J. L. C. W., & de Matos Jorge, L. M. (2023). Kinetic study of glycerol hydrodeoxygenation on Al₂O₃ and NiMo₂C/Al₂O₃ catalysts. *Fuel*, 354.
- Błoński, P., Dennler, S., & Hafner, J. (2011). Strong spin-orbit effects in small Pt clusters: Geometric structure, magnetic isomers and anisotropy. *Journal of Chemical Physics*, 134(3).
- Bychko, I., Abakumov, A., Didenko, O., Chen, M., Tang, J., & Strizhak, P. (2022). Differences in the structure and functionalities of graphene oxide and reduced graphene oxide obtained from graphite with various degrees of graphitization. *Journal of Physics and Chemistry of Solids*, 164.
- Cano, F. J., Romero-Núñez, A., Liu, H., Reyes-Vallejo, O., Ashok, A., Velumani, S., & Kassiba, A. (2023). Variation in the bandgap by gradual reduction of GOs with different oxidation degrees: A DFT analysis. *Diamond and Related Materials*, 139.
- Cao, M., Ma, Y., Ruan, T., Li, L., Chen, B., Qiu, X., Fan, D., & Ouyang, X. (2024). Highly efficient hydrogenolysis of lignin into monophenol over an atomically dispersed platinum catalyst. *Chemical Engineering Journal*, 485.
- Cao, Y., Wang, D., Lin, Y., Liu, W., Cao, L., Liu, X., Zhang, W., Mou, X., Fang, S., Shen, X., & Yao, T. (2018). Single Pt Atom with Highly Vacant d-Orbital for Accelerating Photocatalytic H₂ Evolution. *ACS Applied Energy Materials*, 1(11), 6082–6088. <https://doi.org/10.1021/acsaem.8b01143>
- Carmona-Pichardo, M., Camacho-Mendoza, R. L., Zarate Hernandez, L. A., Cruz-Borbolla, J., González-Ramírez, C. A., Pandiyan, T., & Jayanthi, N. (2014). Activation of Pt-O and Pt-H bonds: DFT studies on adsorption of [Gd(H₂O)_n]³⁺ (n=8-9) with Ptn (n=3-7) cluster. *Computational and Theoretical Chemistry*, 1047,

38–46.

- Checa, M., Nogales-Delgado, S., Montes, V., & Encinar, J. M. (2020). Recent advances in glycerol catalytic valorization: A review. In *Catalysts* (Vol. 10, Issue 11, pp. 1–41). MDPI.
- Chen, B. W. J., Xu, L., & Mavrikakis, M. (2021). Computational Methods in Heterogeneous Catalysis. In *Chemical Reviews* (Vol. 121, Issue 2, pp. 1007–1048). American Chemical Society.
- Chen, Z., Erwin, B. J., & Che, L. (2023). Hydrocracking of polyethylene to hydrocarbon fuels over Pt/USY catalysts: Assessment of the hydrogen donors. *Journal of Cleaner Production*, 424.
- Cravotto, G., Cintas, P., Tagliapietra, S., & Calcio, E. (2013). Glycerol: solvent and building block of choice for microwave and ultrasound irradiation procedures. *Green Chemistry*.
- Cui, C., Luo, Z., & Yao, J. (2019). Enhanced catalysis of Pt₃ clusters supported on graphene for n-h bond dissociation. *CCS Chemistry*, 1(2), 215–225.
- Do Nascimento, J. R., D'oliveira, M. R., Veiga, A. G., Chagas, C. A., & Schmal, M. (2020). Synthesis of Reduced Graphene Oxide as a Support for Nano Copper and Palladium/Copper Catalysts for Selective NO Reduction by CO. *ACS Omega*, 5(40), 25568–25581.
- Dubois, S. M. M., Zanolli, Z., Declerck, X., & Charlier, J. C. (2009). Electronic properties and quantum transport in Graphene-based nanostructures. *European Physical Journal B*, 72(1), 1–24.
- Fampiou, I., & Ramasubramaniam, A. (2012). Binding of Pt nanoclusters to point defects in graphene: Adsorption, morphology, and electronic structure. *Journal of Physical Chemistry C*, 116(11), 6543–6555.
- Fei, Y., Ye, X., Al-Baldawy, A. S., Wan, J., Lan, J., Zhao, J., Wang, Z., Qu, S., Hong, R., Guo, S., Huang, S., Li, S., & Kang, J. (2022). Enhanced photocatalytic performance of TiO₂ nanowires by substituting noble metal particles with reduced graphene oxide. *Current Applied Physics*, 44, 33–39.
- Feng, Y., Zhang, S., Zhu, L., Li, G., Zhao, N., Zhang, H., & Chen, B. H. (2022). Reduced graphene oxide-supported ruthenium nanocatalysts for highly efficient electrocatalytic hydrogen evolution reaction. *International Journal of Hydrogen Energy*, 47(94), 39853–39863.
- Geerlings, P., De Proft, F., & Langenaeker, W. (2003). Conceptual density functional theory. *Chemical Reviews*, 103(5), 1793–1873. <https://doi.org/10.1021/cr990029p>
- Główka, M., & Krawczyk, T. (2023). New Trends and Perspectives in Production of 1,2-Propanediol. *ACS Sustainable Chemistry and Engineering*, 11(19), 7274–7287.
- Gómez, E. V., Ramírez Guarnizo, N. A., Perea, J. D., López, A. S., & Prías-Barragán, J. J. (2022). Exploring Molecular and Electronic Property Predictions of Reduced Graphene Oxide Nanoflakes via Density Functional Theory. *ACS Omega*, 7(5), 3872–3880.
- Han, G. H., Lee, S. H., Hwang, S. Y., & Lee, K. Y. (2021). Advanced Development Strategy of Nano Catalyst and DFT Calculations for Direct Synthesis of Hydrogen Peroxide. In *Advanced Energy Materials* (Vol. 11, Issue 27). John Wiley and Sons Inc.
- Hassandoost, R., Pouran, S. R., Khataee, A., Orooji, Y., & Joo, S. W. (2019). Hierarchically structured ternary heterojunctions based on Ce³⁺/Ce⁴⁺ modified Fe₃O₄ nanoparticles anchored onto graphene oxide sheets as magnetic visible-light-active

- photocatalysts for decontamination of oxytetracycline. *Journal of Hazardous Materials*, 376, 200–211
- He, F. G., Zhang, T., Liang, J., Li, H. P., He, Y. R., Gao, X. H., Zhang, J. L., & Zhao, T. S. (2023). Application of DFT calculation in the study of iron-based catalyst for Fischer-Tropsch synthesis. *Ranliao Huaxue Xuebao/Journal of Fuel Chemistry and Technology*, 51(11), 1540–1564
- He, Z., & Wang, X. (2013). Hydrodeoxygenation of model compounds and catalytic systems for pyrolysis bio-oils upgrading. *Catalysis for Sustainable Energy*, 1.
- Ho, Y. A., Wang, S. Y., Chiang, W. H., Nguyen, V. H., Chiu, J. L., & Wu, J. C. S. (2019). Moderate-temperature catalytic incineration of cooking oil fumes using hydrophobic honeycomb supported Pt/CNT catalyst. *Journal of Hazardous Materials*, 379.
- Horáček, J., Št'Ávová, G., Kelbichová, V., & Kubička, D. (2013). Zeolite-Beta-supported platinum catalysts for hydrogenation/ hydrodeoxygenation of pyrolysis oil model compounds. *Catalysis Today*, 204, 38–45.
- Ignatov, S. K., Razuvaev, A. G., Loginova, A. S., & Masunov, A. E. (2019). Global structure optimization of pt clusters based on the modified empirical potentials, calibrated using density functional theory. *Journal of Physical Chemistry C*, 123(47), 29024–29036.
- Ioannidou, G., & Lemonidou, A. A. (2023). Bio-glycerol hydrodeoxygenation to propylene: advancing knowledge on Mo-based catalyst characteristics and reaction pathways under flow conditions. *Green Chemistry*, 25(23), 10043–10060.
- Islam, Md. M., Ahmed, S. S., Rashid, M., & Akanda, Md. M. (2019). Mechanical and Thermal Properties of Graphene over Composite Materials: A Technical Review. *Journal of Casting & Materials Engineering*, 3(1), 19.
- Ito, H., Oshima, K., Yamamoto, T., Ting, K. W., Toyao, T., Sugiyama, T., Kato, Y., Morita, K., Ohashi, A., & Kishida, M. (2022). Improved catalytic stability of Pt/TiO₂ catalysts for methylcyclohexane dehydrogenation via selenium addition. *International Journal of Hydrogen Energy*, 47(91), 38635–38643.
- Jennings, P. C., & Johnston, R. L. (2013). Structures of small Ti- and V-doped Pt clusters: A GA-DFT study. *Computational and Theoretical Chemistry*, 1021, 91–100.
- Jeong, G. U., & Lee, B. J. (2020). Interatomic potentials for Pt-C and Pd-C systems and a study of structure-adsorption relationship in large Pt/graphene system. *Computational Materials Science*, 185. <https://doi.org/10.1016/j.commatsci.2020.109946>
- Jiang, J., Yang, C., Lu, Z., Ding, J., Li, T., Lu, Y., & Cao, F. (2015). Characterization and application of a Pt/ZSM-5/SSMF catalyst for hydrocracking of paraffin wax. *Catalysis Communications*, 60, 1–4. <https://doi.org/10.1016/j.catcom.2014.10.025>
- Jiao, Y., Wang, J., Zhu, Q., Li, X., & Chen, Y. (2014). The performance of Pt/ZrxTixAl_{1-2x}O₂ as Kerosene cracking catalysts. *Cuihua Xuebao/Chinese Journal of Catalysis*, 35(2), 175–184. [https://doi.org/10.1016/s1872-2067\(12\)60732-2](https://doi.org/10.1016/s1872-2067(12)60732-2)
- Julkapli, N. M., & Bagheri, S. (2015). Graphene supported heterogeneous catalysts: An overview. *International Journal of Hydrogen Energy* (Vol. 40, Issue 2, pp. 948–979). Elsevier Ltd.
- Ke, Y., Zhu, C., Li, J., Liu, H., & Yuan, H. (2022). Catalytic Oxidation of Glycerol over Pt Supported on MOF-Derived Carbon Nanosheets. *ACS Omega*, 7(50), 46452–46465.
- Kumar, H., Sharma, R., Yadav, A., & Kumari, R. (2021). Recent advancement made in the field of reduced graphene oxide-based nanocomposites used in the energy storage devices: A review. *Journal of Energy Storage* (Vol. 33). Elsevier.
- Kumar, J., Ansh, & Shrivastava, M. (2021). Introduction of near to Far Infrared Range

- Direct Band Gaps in Graphene: A First Principle Insight. *ACS Omega*, 6(8), 5619–5626.
- Lashanizadegan, M., Anafcheh, M., Mirzazadeh, H., & Gholipoor, P. (2020). Efficient Cd/Ce nanoparticles supported on reduced graphene oxide for the reduction of 4-nitrophenol and the oxidation of olefins: Experimental and theoretical study. *Materials Research Bulletin*, 125.
- Lee, D. W., & Seo, J. W. (2011). Sp²/sp³ carbon ratio in graphite oxide with different preparation times. *Journal of Physical Chemistry C*, 115(6), 2705–2708.
- Lehner, B. A. E., Benz, D., Moshkalev, S. A., Meyer, A. S., Cotta, M. A., & Janissen, R. (2021). Biocompatible Graphene Oxide Nanosheets Densely Functionalized with Biologically Active Molecules for Biosensing Applications. *ACS Applied Nano Materials*, 4(8), 8334–8342.
- Li, X., Wang, Q., Chen, J., Li, S., Wang, D., & Zheng, Z. (2021). One-step hydrotreatment of inedible oil for production the second-generation biofuel over Pt-Sn/SAPO-11 catalyst. *Journal of Analytical and Applied Pyrolysis*, 156.
- Lin, X. X., Wang, A. J., Fang, K. M., Yuan, J., & Feng, J. J. (2017). One-Pot Seedless Aqueous Synthesis of Reduced Graphene Oxide (rGO)-Supported Core-Shell Pt@Pd Nanoflowers as Advanced Catalysts for Oxygen Reduction and Hydrogen Evolution. *ACS Sustainable Chemistry and Engineering*, 5(10), 8675–8683.
- Liu, B., Zhou, M., Chan, M. K. Y., & Greeley, J. P. (2015). Understanding Polyol Decomposition on Bimetallic Pt-Mo Catalysts - A DFT Study of Glycerol. *ACS Catalysis*, 5(8), 4942–4950.
- Liu, L., Asano, T., Nakagawa, Y., Gu, M., Li, C., Tamura, M., & Tomishige, K. (2021). Structure and performance relationship of silica-supported platinum-tungsten catalysts in selective C-O hydrogenolysis of glycerol and 1,4-anhydroerythritol. *Applied Catalysis B: Environmental*, 292.
- Liu, R., Zhang, C., Chu, W., Chen, C., & Sun, W. (2024). Enhancing catalytic efficiency in zeolite-supported Pt nanoclusters for RWGS reaction through potassium incorporation: A DFT study. *International Journal of Hydrogen Energy*.
- Ma, X. (2022). Development of Computational Chemistry and Application of Computational Methods. *Journal of Physics: Conference Series*, 2386(1).
- Manbeck, K. A., Kundu, S., Walsh, A. P., Brennessel, W. W., & Jones, W. D. (2012). Carbon-oxygen bond activation in esters by platinum(0): Cleavage of the less reactive bond. *Organometallics*, 31(14), 5018–5024.
- Mandeep, Gulati, A., & Kakkar, R. (2020). DFT study of adsorption of glyphosate pesticide on Pt-Cu decorated pyridine-like nitrogen-doped graphene. *Journal of Nanoparticle Research*, 22(1).
- Martinez, T. J., Ben-Nun, M., & Levine, R. D. (1996). *Multi-Electronic-State Molecular Dynamics: A Wave Function Approach with Applications*.
- Meruane-Anich, J., Araya-Lopez, C., Santiago, R., Escalona, N., & Canales, R. I. (2024). Sustainable synthesis and extraction of 5-methyl-N-phenyl-2-pyrrolidone produced via reductive amination of levulinic acid. *Separation and Purification Technology*, 338.
- Miao, G., Shi, L., Zhou, Z., Zhu, L., Zhang, Y., Zhao, X., Luo, H., Li, S., Kong, L., & Sun, Y. (2020). Catalyst design for selective hydrodeoxygenation of glycerol to 1,3-propanediol. *ACS Catalysis*, 10(24), 15217–15226.
- Mondal, S., & Biswas, P. (2022). Conversion of bio-glycerol to propylene glycol over basic oxides (MgO, La₂O₃, MgO-La₂O₃, CaO, and BaO₂) supported Cu-Zn bimetallic

- catalyst: A reaction kinetic study. *Environmental Technology and Innovation*, 27.
- Moon, H. S., Lee, J. H., Kwon, S., Kim, I. T., & Lee, S. G. (2015). Mechanisms of na adsorption on graphene and graphene oxide: Density functional theory approach. *Carbon Letters*, 16(2), 116–120
- Munarriz, J., Zhang, Z., Sautet, P., & Alexandrova, A. N. (2022). Graphite-Supported PtnCluster Electrocatalysts: Major Change of Active Sites as a Function of the Applied Potential. *ACS Catalysis*, 12(23), 14517–14526.
- Nakagawa, Y., & Tomishige, K. (2011). Heterogeneous catalysis of the glycerol hydrogenolysis. *Catalysis Science and Technology* 1(2), 179–190.
- Numpilai, T., Cheng, C. K., Seubsai, A., Faungnawakij, K., Limtrakul, J., & Witoon, T. (2021). Sustainable utilization of waste glycerol for 1,3-propanediol production over Pt/WO_x/Al₂O₃ catalysts: Effects of catalyst pore sizes and optimization of synthesis conditions. *Environmental Pollution*, 272.
- Nuzhdin, A. L., Simonov, P. A., Bukhtiyarova, G. A., Eltsov, I. V., & Bukhtiyarov, V. I. (2021). Reductive amination of 5-acetoxymethylfurfural over Pt/Al₂O₃ catalyst in a flow reactor. *Molecular Catalysis*, 499.
- Ogoshi, E., Popolin-Neto, M., Acosta, C. M., Nascimento, G. M., Rodrigues, J. N. B., Oliveira, O. N., Paulovich, F. V., & Dalpian, G. M. (2024). Learning from machine learning: the case of band-gap directness in semiconductors. *Discover Materials* , 4(1).
- Okazaki-Maeda, K., Morikawa, Y., Tanaka, S., & Kohyama, M. (2010). Structures of Pt clusters on graphene by first-principles calculations. *Surface Science*, 604(2), 144–154.
- Olson, A. L., Tunér, M., & Verhelst, S. (2023). A concise review of glycerol derivatives for use as fuel additives. *Heliyon* 9 (1). Elsevier Ltd.
- Özkar, S. (2021). A review on platinum(0) nanocatalysts for hydrogen generation from the hydrolysis of ammonia borane. *Dalton Transactions* 50(36), 12349–12364.
- Pancharatna, P. D., Jhaa, G., & Balakrishnarajan, M. M. (2020). Nature of Interactions between Epoxides in Graphene Oxide. *Journal of Physical Chemistry C*, 124(2), 1695–1703.
- Phan, D. P., & Lee, E. Y. (2020). Phosphoric acid enhancement in a Pt-encapsulated Metal-Organic Framework (MOF) bifunctional catalyst for efficient hydro-deoxygenation of oleic acid from biomass. *Journal of Catalysis*, 386, 19–29.
- Pinyaphong, P., & La-up, A. (2024). Optimization of 1,3-propanediol production from fermentation of crude glycerol by immobilized *Bacillus pumilus*. *Heliyon*, 10(15).
- Pirzadi, Z., & Meshkani, F. (2022). From glycerol production to its value-added uses: A critical review. *Fuel* (Vol. 329). Elsevier Ltd.
- Raja, A., Son, N., Swaminathan, M., & Kang, M. (2023). Synthesis of a powerful single copper/tungsten atom oxide photocatalyst dispersed on the surface of a reduced graphene oxide-titanium composite for H₂ production and pollutant degradation. *Chemical Engineering Journal*, 468.
- Rana, S., Bishwa Bidita Varadwaj, G., & Jonnalagadda, S. B. (2019). Ni nanoparticle supported reduced graphene oxide as a highly active and durable heterogeneous material for coupling reactions. *Nanoscale Advances*, 1(4), 1527–1530.
- Redina, E. A., Vikanova, K. V., Tkachenko, O. P., Kapustin, G. I., & Kustov, L. M. (2022). Selective Hydrodeoxygenation of Glycerol to 1,2-Propanediol with the Pt/CeO₂–ZrO₂ Catalyst. *Doklady Chemistry*, 507(2), 261–269.
- Restrepo, J. B., Paternina-Arboleda, C. D., & Bula, A. J. (2021). 1,2—propanediol

- production from glycerol derived from biodiesel's production: Technical and economic study. *Energies*, 14(16).
- Ristiana, D. D., Handayani, M., Anggoro, M. A., Widagdo, B. W., Angelina, E., Sutanto, H., Anshori, I., Febriana, E., Firdiyono, F., Sulistiyono, E., Prasetyo, A. B., Lusiana, & Astawa, I. N. G. P. (2024). Reduced Graphene Oxide/Nano-Silica (rGO/n-SiO₂) Nanocomposite for Electrode Materials of Supercapacitor with a High Cycling Stability. *South African Journal of Chemical Engineering*.
- Rout, L., Kumar, A., Dhaka, R. S., Reddy, G. N., Giri, S., & Dash, P. (2017). Bimetallic Au-Cu alloy nanoparticles on reduced graphene oxide support: Synthesis, catalytic activity and investigation of synergistic effect by DFT analysis. *Applied Catalysis A: General*, 538, 107–122.
- Saleheen, M., Mamun, O., Mohan Verma, A., Sahsah, D., & Heyden, A. (2023). Understanding the influence of solvents on the Pt-catalyzed hydrodeoxygenation of guaiacol. *Journal of Catalysis*, 425, 212–232.
- Sánchez-Peña, P., Rodríguez, J., Gabriel, D., Baeza, J. A., Guisasola, A., & Baeza, M. (2022). Graphene functionalization with metallic Pt nanoparticles: A path to cost-efficient H₂ production in microbial electrolysis cells. *International Journal of Hydrogen Energy*, 47(34), 15397–15409.
- Shu, R., Lin, B., Wang, C., Zhang, J., Cheng, Z., & Chen, Y. (2019). Upgrading phenolic compounds and bio-oil through hydrodeoxygenation using highly dispersed Pt/TiO₂ catalyst. *Fuel*, 239, 1083–1090.
- Song, O., & Luo, X. (2022). Zinc-doped hydroxyapatite and graphene oxide composites for bone and teeth implants: a theoretical understanding. *Materials Advances*, 3(22), 8323–8331.
- Sun, W., Hong, Y., Li, T., Chu, H., Liu, J., Feng, L., & Baghayeri, M. (2023). Biogenic synthesis of reduced graphene oxide decorated with silver nanoparticles (rGO/Ag NPs) using table olive (*olea europaea*) for efficient and rapid catalytic reduction of organic pollutants. *Chemosphere*, 310.
- Tang, Y., Lu, Z., Chen, W., Li, W., & Dai, X. (2015). Geometric stability and reaction activity of Pt clusters adsorbed graphene substrates for catalytic CO oxidation. *Physical Chemistry Chemical Physics*, 17(17), 11598–11608.
- Vasiliadou, E. S., & Lemonidou, A. A. (2013). Kinetic study of liquid-phase glycerol hydrogenolysis over Cu/SiO₂ catalyst. *Chemical Engineering Journal*, 231, 103–112.
- Vasiliadou, E. S., & Lemonidou, A. A. (2014). Catalytic glycerol hydrodeoxygenation under inert atmosphere: Ethanol as a hydrogen donor. *Catalysts*, 4(4), 397–413.
- Wan, W., Ammal, S. C., Lin, Z., You, K. E., Heyden, A., & Chen, J. G. (2018). Controlling reaction pathways of selective C–O bond cleavage of glycerol. *Nature Communications*, 9(1).
- Wang, J., Yang, M., & Wang, A. (2020). Selective hydrogenolysis of glycerol to 1,3-propanediol over Pt-W based catalysts. *Chinese Journal of Catalysis* (Vol. 41, Issue 9, pp. 1311–1319). Science Press.
- Wen, H., Chen, C., Tang, P. P., & Wang, P. (2023). Ultrasmall nickel boride nanoparticles supported on reduced graphene oxide as a high-performance catalyst for hydrazine electrooxidation. *Electrochimica Acta*, 471.
- Yan, X., Duan, P., Zhang, F., Li, H., Zhang, H., Zhao, M., Zhang, X., Xu, B., Pennycook, S. J., & Guo, J. (2019). Stable single-atom platinum catalyst trapped in carbon onion graphitic shells for improved chemoselective hydrogenation of nitroarenes. *Carbon*, 143, 378–384.

- Yeo, B. C., Kim, D., Kim, C., & Han, S. S. (2019). Pattern Learning Electronic Density of States. *Scientific Reports*, 9(1).
- Zhang, D., Yu, W., Li, Z., Wang, Z., Yin, B., Liu, X., Shen, J., Yang, C., Yan, W., & Jin, X. (2022). Strong metal-support interaction of palladium carbide in PtPd/C catalysts for enhanced catalytic transfer hydrogenolysis of glycerol. *Biomass and Bioenergy*, 163.
- Zhang, W., Xu, H., Xie, F., Ma, X., Niu, B., Chen, M., Zhang, H., Zhang, Y., & Long, D. (2022). General synthesis of ultrafine metal oxide/reduced graphene oxide nanocomposites for ultrahigh-flux nanofiltration membrane. *Nature Communications*, 13(1).
- Zhang, X., Cui, G., & Wei, M. (2020). PtIn Alloy Catalysts toward Selective Hydrogenolysis of Glycerol to 1,2-Propanediol. *Industrial and Engineering Chemistry Research*, 59(29), 12999–13006
- Zhang, X., Wang, K., Chen, J., Zhu, L., & Wang, S. (2020). Mild hydrogenation of bio-oil and its derived phenolic monomers over Pt–Ni bimetal-based catalysts. *Applied Energy*, 275.
- Zhao, B., Liang, Y., Liu, L., He, Q., & Dong, J. (2020). Discovering positively charged Pt for enhanced hydrogenolysis of glycerol to 1,3-propanediol. *Green Chemistry*, 22(23), 8254–8259
- Zhao, X., Fan, Y., Wang, H., Gao, C., Liu, Z., Li, B., Peng, Z., Yang, J. H., & Liu, B. (2020). Cobalt Phosphide-Embedded Reduced Graphene Oxide as a Bifunctional Catalyst for Overall Water Splitting. *ACS Omega*, 5(12), 6516–6522.