

- Abid, S. A. Ahmed Muneer, A. Al-Kadmy, I. M. S. Sattar, A. A. Beshbishi, A. M. Batiha, G. E. S. Hetta, H. F. "Biosensors as a future diagnostic approach for COVID-19," *Life Sciences*, **273** (2021) 119117.
- Arul, N. S. Nithya, V. D. "Molybdenum disulfide quantum dots: Synthesis and applications," *RSC Adv.* **6** (2016) 65670–65682.
- Asati, A. Santra, S. Kaittanis, C. Nath, S. Perez, J. M. "Oxidase-like activity of polymer Coated cerium oxide nanoparticles," *Angew. Chemie Int. Ed.* **48** (2009) 2308-2312.
- Ballestri, S. Mantovani, A. Baldelli, E. Lugari, S. Maurantonio, M. Nascimbeni, F. Marrazzo, A. Romagnoli, D. Targher, G. Lonardo, A. "Liver Fibrosis Biomarkers Accurately Exclude Advanced Fibrosis and Are Associated with Higher Cardiovascular Risk Scores in Patients with NAFLD or Viral Chronic Liver Disease," *Diagnostics (Basel)*, **11(1)** (2021) 98.
- Bally, R. W. Gribnau, T. C. J. "Some Aspects of the Chromogen 3,3'5,5' Tetramethylbenzidine as Hydrogen Donor in a Horseradish Peroxidase Assay," *J. Clin. Chem. Clin. Biochem.* **27** (1989) 791-796.
- Batinić-Haberle, I. Re bouças, J. S. Spasojević, I. "Superoxide dismutase mimics: chemistry, pharmacology, and therapeutic potential," *Antioxidants & Redox Signaling*, **13(6)** (2010) 877–918.
- Beltrame, P. Comotti, M. Della Pina, C. Rossi, M. "Aerobic oxidation of glucose: II. Catalysis by colloidal gold," *Applied Catalysis A: General*, **297(1)** (2006) 1-7.
- Biswal, M. Banerjee, A. Deo, M. Ogale, S. "From dead leaves to high energy density supercapacitors," *Energy Environ. Sci.* **6** (2013) 1249-1259.
- Breslow, R. and Overman, L. E. "Artificial enzyme combining a metal catalytic group and a hydrophobic binding cavity," *J. Am. Chem. Soc.* **92(4)** (1970) 1075–1077.
- Califf, R. M. "Biomarker definitions and their applications," *Experimental Biology and Medicine*, **243(3)** (2018) 213-221.
- Cao, H. Wang, H. Huang, Y. Sun, Y. Shi, S. Tang, M. "Quantification of gold(III) in solution and with a test stripe via the quenching of the fluorescence of molybdenum disulfide quantum dots," *Microchim Acta*, **184** (2017) 91-100.

- Cao, L. Wang, P. Chen, L. Wu, Y. Di, J. “A photoelectrochemical glucose sensor based on gold nanoparticles as a mimic enzyme of glucose oxidase,” *RSC advances*, **9(27)** (2019) 15307-15313.
- Cash, K. J. Clark, H. A. “Nanosensors and nanomaterials for monitoring glucose in diabetes,” *Trends in molecular medicine*, **16(12)** (2010) 584-593.
- Chaibakhsh, N. Moradi-Shoeili, Z. “Enzyme mimetic activities of spinel substituted nano ferrites (MFe_2O_4): A review of synthesis, mechanism and potential applications,” *Mater. Sci. Eng. C*. **99** (2019) 1424–1447.
- Chakraborty, M. Hashmi, M. S. J. “Graphene as a Material – An Overview of Its Properties and Characteristics and Development Potential for Practical Applications,” *In Reference Module in Materials Science and Materials Engineering*, (2018).
- Chandrakala, V. Aruna, V. Angajala, G. “Review on metal nanoparticles as nanocarriers: current challenges and perspectives in drug delivery systems,” *emergent mater.*, (2022) 1-23.
- Chen, H. Zhou, Z. Lu, Q. Wu, C. Liu, M. Zhang, Y. Yao, S. “Molecular structure regulation and enzyme cascade signal amplification strategy for upconversion ratiometric luminescent and colorimetric alkaline phosphatase detection,” *Anal. Chim. Acta*. **1051** (2019) 160-168.
- Chen, Q. Liu, M. Zhao, J. Peng, X. Chen, X. Mi, N. Yin, B. Li, H. Zhang, Y. Yao, S. “Water-dispersible silicon dots as a peroxidase mimetic for the highly-sensitive colorimetric detection of glucose,” *ChemComm*. **50** (2014) 6771–6774.
- Chen, Q. Liu, M. Zhao, J. Peng, X. Chen, X. Mi, N. Yin, B. Li, H. Zhang, Y. Yao, S. “Water-dispersible silicon dots as a peroxidase mimetic for the highly-sensitive colorimetric detection of glucose,” *Chemical Communications*, **50** (2014) 6771-6774.
- Chen, S. Zhang, D. Yang, Y. Song, X. “An electrochemical nonenzymatic microsensor modified by nickel cobaltate nanospheres for glucose sensing in urine,” *IEEE Sensors Journal*, **21(12)** (2021) 13074-13081.
- Chen, W. Hong, L. Liu, A. L. Liu, J. Q. Lin, X. H. Xia, X. H. “Enhanced chemiluminescence of the luminol-hydrogen peroxide system by colloidal cupric oxide nanoparticles as peroxidase mimic,” *Talanta*, **99** (2012) 643–648.

- Chen, X. Tian, X. Su, B. Huang, Z. Chen, X. Oyama, M. “Au nanoparticles on citrate-functionalized graphene nanosheets with a high peroxidase like performance,” *Dalton trans.* **43** (2014) 7449-7454.
- Cho, N.H. Shaw, J.E. Karuranga, S. Huang, Y. da Rocha Fernandes, J.D. Ohlrogge, A.W. Malanda, B.I.D.F. “IDF Diabetes Atlas: Global estimates of diabetes prevalence for 2017 and projections for 2045,” *Diabetes Research and Clinical Practice.* **138** (2018) 271-281.
- Collings, A. F. Caruso, F. “Biosensors: recent advances,” *Reports on Progress in Physics,* **60** (11) (1997) 1397–1445.
- Cotruț, R. Bădulescu, L. “UPLC rapid quantification of ascorbic acid in several fruits and vegetables extracted using different solvents,” *Agric. Agric. Sci. Procedia.* **10** (2016) 160 – 166.
- Culebras, M. Barrett, A. Pishnamazi, M. Walker, G. M. Collins, M. N. “Wood-Derived Hydrogels as a Platform for Drug-Release Systems,” *ACS Sustain. Chem. Eng.* **9** (2021) 2515–2522.
- da Cruz Santos, C. Santos, P. C. M. Rocha, K. L. S. Thomasini, R. L. de Oliveira, D. B. Franco, D. L. Ferreira, L. F. “A new tool for dengue virus diagnosis: Optimization and detection of anti-NS1 antibodies in serum samples by impedimetric transducers,” *Microchem. J.*, **154** (2020) 104544.
- Darabdhara, G. Sharma, B. Das, M. R. Boukherroub, R. Szunerits, S. “Cu-Ag bimetallic nanoparticles on reduced graphene oxide nanosheets as peroxidase mimic for glucose and ascorbic acid detection,” *Sensors and Actuators B: Chemical,* **238** (2017) 842-851.
- De Faria, L. V. Lisboa, T. P. de Farias, D. M. Araujo, F. M. Machado, M. M. de Sousa, R. A. Matos, M.A.C. Muñoz, R. A. A. Matos, R. C. “Direct analysis of ascorbic acid in food beverage samples by flow injection analysis using reduced graphene oxide sensor,” *Food Chem.* **319** (2020) 126509-126514.
- Dhandapani, N. Murugesan, T. Chinnuswamy, V. Ponpandian, N. “A nanocomposite of NiFe₂O₄-PANI as a duo active electrocatalyst toward the sensitive colorimetric and electrochemical sensing of ascorbic acid,” *Nanoscale Adv.* **2** (2020) 3481-3493.

- Dhara, K. Mahapatra, D. R. "Review on nanomaterials-enabled electrochemical sensors for ascorbic acid detection," *Anal. Biochem.* **586** (2019) 113415-113431.
- Dhiman, A. Kalra, P. Bansal, V. Bruno, J. G. Sharma, T.K. "Aptamer-based point-of-care diagnostic platforms," *Sensors and Actuators B: Chemical*, **246** (2017) 535-553.
- Ding, H. Hu, B. Zhang, B. Zhang, H. Yan, X. Nie, G. Liang, M. "Carbon-based nanozymes for biomedical applications," *Nano Research*, **14(3)** (2021) 570-583.
- Ealia, S. A. M. Saravanakumar, M.P. "A review on the classification, characterisation, synthesis of nanoparticles and their application," *In IOP conference series: materials science and engineering*, **263(3)** (2017) 032019.
- Ellis, W. C. Tran, C. T. Denardo, M. A. Fischer, A. Ryabov, A. D. Collins, T. J. "Design of more powerful iron-TAML peroxidase enzyme mimics," *J Am Chem Soc*, **131 (50)** (2009) 18052-18055.
- El-Safty, S.A. Shenashen, M.A. "Advanced nanoscale build-up sensors for daily life monitoring of diabetics," *Advanced Materials Interfaces*. **7(15)** (2020) 2000153.
- Emoto, M. C. Matsuoka, Y. Yamada, K. Sato-Akaba, H. Fujii, H. G. "Non-invasive imaging of the levels and effects of glutathione on the redox status of mouse brain using electron paramagnetic resonance imaging," *Biochem. Biophys. Res. Commun.* **485** (2017) 802–806.
- Engelberth, A. S. Ventura, S. P. M. Vilaplana, F. Venkatesu, P. Zhu, J. Y. Carrier, D. J. "ACS Sustainable Chemistry & Engineering Welcomes Manuscripts on the Circular Economy of Biomass," *ACS Sustain. Chem. Eng.* **9** (2021) 2410–2411.
- Fan, Y. Huang, Y. "The effective peroxidase-like activity of chitosan-functionalized CoFe₂O₄ nanoparticles for chemiluminescence sensing of hydrogen peroxide and glucose," *Analyst*, **137(5)** (2012) 1225-1231.
- Farooq, M. U. Novosad, V. Rozhkova, E. A. Wali, H. Ali, A. Fateh, A. A. Neogi, P. B. Neogi, A. Wang, Z. "Gold nanoparticles-enabled efficient dual delivery of anticancer therapeutics to HeLa cells," *Scientific reports*, **8** (2018) 1-12.
- Feng, J. Huang, P. Shi, S. Deng, K.Y. Wu, F.Y. "Colorimetric detection of glutathione in cells based on peroxidase-like activity of gold nanoclusters: A promising powerful tool for

- identifying cancer cells," *Anal. Chim. Acta.* **967** (2017) 64–69.
- Feng, W. Chen, L. Qin, M. Zhou, X. Zhang, Q. Miao, Y. Qiu, K. Zhang, Y. He, C. "Flower-like PEGylated MoS₂ nanoflakes for near-infrared photothermal cancer therapy OPEN," *Nat. Publ. Gr.* **5** (2015).
- Fruehauf, J. P. Meyskens, F. L. "Reactive oxygen species: A breath of life or death?" *Clin. Cancer Res.* **13** (2007) 789–794.
- Fu, Y. Zhang, H. Dai, S. Zhi, X. Zhang, J. Li, W. "Glutathione-stabilized palladium nanozyme for colorimetric assay of silver(i) ions," *Analyst.* **140** (2015) 6676–6683.
- Gao, L. Zhuang, J. Nie, L. Zhang, J. Zhang, Y. Gu, N. Wang, T. Feng, J. Yang, D. Perrett, S. Yan, X. "Intrinsic peroxidaselike activity of ferromagnetic nanoparticles," *Nature Nanotechnology*, **2 (9)** (2007) 577– 583.
- Gao, Y. Huang, Y. Chen, J. Liu, Y. Xu, Y. Ning, X. "A novel luminescent “nanochip” as a tandem catalytic system for chemiluminescent detection of sweat glucose," *Analytical Chemistry*, **93(30)** (2021) 10593-10600.
- Gu, W. Yan, Y. Zhang, C. Ding, C. Xian, Y. "One-Step Synthesis of Water-Soluble MoS₂ Quantum Dots via a Hydrothermal Method as a Fluorescent Probe for Hyaluronidase Detection," *ACS Appl. Mater. Interfaces.* **8** (2016) 11272–11279.
- Gui, M. Fasoli, M. Carradore, R. "Digital well-being. Developing a new theoretical tool for media literacy research," *Italian Journal of Sociology of Education*, **9(1)** (2017).
- Guibault, G. G. Schwartz, M. K. "Analysis of Substrates," In *Handbook of Enzymatic Methods of Analysis; Ed.; Clinical and Biochemical Analysis; Marcel Dekker, Inc.: New York*, (1976) 752.
- Guo, S. Fang, Y. Dong, S. "Reducing sugar: new functional molecules for the green synthesis of graphene nanosheets," *ACS Nano*, **4** (2010) 2429-2437.
- Guo, Y. Wang, H. Sun, Y. Qu, B. "A disulfide bound-molecular beacon as a fluorescent probe for the detection of reduced glutathione and its application in cells," *Chem. Commun.* **48** (2012) 3221–3223.
- Gurmessa, S. K. Tufa, L. T. Kim, J. Lee, K. I. Kim, Y. M. Tran, V. T. Nguyen, H.Q. Shim, T. S. Kim, J. Park, T. J. Lee, J. Kim, H. J. "Colorimetric Detection of Mycobacterium tuberculosis ESX-1 Substrate Protein in Clinical Samples Using Au@Pd

NanoparticleBased Magnetic Enzyme-Linked Immunosorbent Assay,” *ACS Appl. Nano Mater.* **4** (2021) 539–549.

Han, S. Chen, X. Fan, Y. Zhang, Y. Yang, Z. Kong, X. Liu, Z. Liu, Q. Zhang, X. “The excellent peroxidase-like activity of uniform CuCo₂O₄ microspheres with oxygen vacancy for fast sensing of hydrogen peroxide and ascorbic acid,” *New Journal of Chemistry*, **45** (2021) 2030-2037.

Han, Y. Luo, L. Zhang, L. Kang, Y. Sun, H. Dan, J. Sun, J. Zhang, W. Yue, T. Wang, J. “Oxidase-like Fe–Mn bimetallic nanozymes for colorimetric detection of ascorbic acid in kiwi fruit,” *LWT-Food Sci. Technol.* **154** (2022) 112821.

Hayat, A. Cunningham, J. Bulbul, G. Andreeescu, S. “Evaluation of the oxidase like activity of nanoceria and its application in colorimetric assays,” *Analytica chimica acta*, **885** (2015) 140-147.

He, B.S. Zhang, J.X. “Rapid Detection of Ascorbic Acid Based on a Dual-Electrode Sensor System Using a Powder Microelectrode Embedded with Carboxyl Multi-Walled Carbon Nanotubes,” *Sensors*. **17** (2017) 1549-1562.

He, Y. Li, N. Lian, J. Yang, Z. Liu, Z. Liu, Q. Zhang, X. Zhang, X. “Colorimetric ascorbic acid sensing from a synergistic catalytic strategy based on 5,10,15,20-tetra(4-pyridyl)-21H,23H-porphyrin functionalized CuS nanohexahedrons with the enhanced peroxidase-like activity,” *Colloids Surf. A*. **598** (2020) 1248553.

Heidarnejad, Z. Dehghani, M. H. Heidari, M. Javedan, G. Ali, I. Sillanpää, M. “Methods for preparation and activation of activated carbon: a review,” *Environmental Chemistry Letters*, **18** (2020) 393–415.

Holzinger, M. Le Goff, A. Cosnier, S. “Nanomaterials for biosensing applications: a review,” *Front. Chem.*, **2** (2014) 1-10.

Hong, L. Liu, A. L. Li, G. W. Chen, W. Lin, X. H. “Chemiluminescent cholesterol sensor based on peroxidase-like activity of cupric oxide nanoparticles,” *Biosensors and Bioelectronics*, **43** (2013) 1-5.

- Hou, L. Jiang, G. Sun, Y. Zhang, X. Huang, J. Liu, S. Lin, T. Ye, F. Zhao, S. "Progress and Trend on the Regulation Methods for Nanozyme Activity and Its Application," *Catalysts*. **9** (2019) 1057-1073.
- Hu, Z. Dai, Z. Hu, X. Yang, B. Liu, Q. Gao, C. Zheng, X. Yu, Y. "A facile preparation of FePt-loaded few-layer MoS₂ nanosheets nanocomposites (F-MoS₂-FePt NCs) and their application for colorimetric detection of H₂O₂ in living cells," *Journal of Nanobiotechnology*, **17(1)** (2019) 38.
- Huang, Z. Zheng, L. Feng, F. Chen, Y. Wang, Z. Lin, Z. Lin, X. Weng, S. "A Simple and Effective Colorimetric Assay for Glucose Based on MnO₂ Nanosheets," *Sensors*, **18** (2018) 2525.
- Jacobs, C. B. Vickrey, T. L. Venton, B. J. "Carbon nanotubes (CNTs) are, Functional groups modulate the sensitivity and electron transfer kinetics of neurochemicals at carbon nanotube modified microelectrodes," *Analyst*, **136** (2011) 3557-3565.
- Jiang, D. Ni, D. Rosenkrans, Z. T. Huang, P. Yan, X. Cai, W. "Nanozyme: new horizons for responsive biomedical applications," *Chem. Soc. Rev.* **48** (2019) 3683-3704.
- Jin, C. Lian, J. Gao, Y. Guo, K. Wu, K. Gao, L. Zhang, X. Zhang, X. Liu, Q. "Si Doped CoO Nanorods as Peroxidase Mimics for Colorimetric Sensing of Reduced Glutathione," *ACS Sustain. Chem. Eng.* **7** (2019) 13989–13998.
- Josephy, P. D. Eling, T. Mason, R. P. "The Horseradish Peroxidase-Catalyzed Oxidation of 3,5,3',5'-Tetramethylbenzidine-Free Radical and Charge-Transfer Complex Intermediates," *J. Biol. Chem.* **257** (1982) 3669–3675.
- Kiani, M. Rehman, M. U. Tian, X. & Yakobson, B. "Two-Dimensional Nanomaterials for the Development of Efficient Gas Sensors: Recent Advances, Challenges, and Future Perspectives," *Advanced Materials Technologies*. **7(7)** (2022) 2101252.
- Kim, M. Y. Kim, J. "Chitosan microgels embedded with catalase nanozyme-loaded mesocellular silica foam for glucose-responsive drug delivery," *ACS Biomaterials Science & Engineering*, **3(4)** (2017) 572-578.
- Ko, N. R., Oh, J. K., "Glutathione-triggered disassembly of dual disulfide located degradable nanocarriers of polylactide-based block copolymers for rapid drug release," *Biomacromolecules*. **15** (2014) 3180–3189.

- Kozitsina, A. Svalova, T. Malysheva, N. Okhokhonin, A. Vidrevich, M. Brainina, K. "Sensors Based on Bio and Biomimetic Receptors in Medical Diagnostic, Environment, and Food Analysis," *Biosensors (Basel)*, **8(2)** (2018) 35.
- Kwon, O. S. Song, H. S. Park, T. H. Jang, J. "Conducting Nanomaterial Sensor Using Natural Receptors," *Chem. Rev.*, **119(1)** (2019) 36-93.
- Lalithambika, K. C. Shanmugapriya, K. Sriram, S. "Photocatalytic activity of MoS₂ nanoparticles: an experimental and DFT analysis," *Appl. Phys. A Mater. Sci. Process*, **125** (2019) 817.
- Lei, J. Ju, H. "Fundamentals and bioanalytical applications of functional quantum dots as electrogenerated emitters of chemiluminescence," *TrAC Trends in Analytical Chemistry*, **30(8)** (2011) 1351–1359.
- Li, Q. Xu, M. Li, X. Li, S. Hou, L. Chen, Y. Sha, J. "A polypyrrole-coated eightfold-helical Wells–Dawson POM-based Cu-FKZ framework for enhanced colorimetric sensing," *Analyst*, **145** (2020) 4021–4030.
- Li, S. F. Zhang, X. M. Du, W. X. Ni, Y. H. Wei, X. W. "Chemiluminescence reactions of a luminol system catalyzed by ZnO nanoparticles," *The Journal of Physical Chemistry C*, **113(3)** (2009) 1046–1051.
- Li, X. Sun, L. Ge, A. Guo, Y. "Enhanced chemiluminescence detection of thrombin based on cerium oxide nanoparticles," *Chemical Communications*, **47(3)** (2011) 947-949.
- Li, X. Sun, L. Yang, X. Zhou, K. Zhang, G. Tong, Z. Wang, C. Sha, J. "Enhancing the colorimetric detection of H₂O₂ and ascorbic acid on polypyrrole coated fluconazole functionalized POMOFs," *Analyst*, **144** (2019) 3347-3356.
- Li, Y. Zhou, H. Li, T. Jian, X. Gao, Z. Song, Y.Y. "Designing ultrafine Pd-Co alloys in mesoporous silica nanospheres with peroxidase-like activity and catalase-like activity," *J. Mater. Chem. B*, **9** (2021) 2016-2024.
- Liang, M. Yan, X. "Nanozymes: From New Concepts, Mechanisms, and Standards to Applications," *Acc. Chem. Res.* **52** (2019) 2190–2200.
- Lin, L. Song, X. Chen, Y. Rong, M. Zhao, T. Wang, Y. Jiang, Y. Chen, X. "Intrinsic peroxidase-like catalytic activity of nitrogen-doped graphene quantum dots and their application in the colorimetric detection of H₂O₂ and glucose," *Anal. Chim. Acta*, **869** (2015) 89-95.

- Lin, T. Zhong, L. Guo, L. Fu, F. Chen, G. "Seeing diabetes: visual detection of glucose based on the intrinsic peroxidase-like activity of MoS₂ nanosheets," *Nanoscale*, **6**(20) (2014) 11856-11862.
- Lin, X. Lin, W. Yang, M. Chen, J. Yu, D. Hong, W. Chen, X. "Rapid colorimetric glucose detection via chain reaction amplification of acrylic functionalized Ag@SiO₂ nanoparticles," *RSC Adv.* **8** (2018) 37729–37734.
- Liu, L. Du, J. Liu, W. E. Guo, Y. Wu, G. Qi, W. Lu, X. "Enhanced His@ AuNCs oxidase-like activity by reduced graphene oxide and its application for colorimetric and electrochemical detection of nitrite," *Analytical and bioanalytical chemistry*, **411** (2019) 2189-2200.
- Liu, L. Zhu, X. Zeng, Y. Wang, H. Lu, Y. Zhang, J. Yin, Z. Chen, Z. Yang, Y. Li, L. "An electrochemical sensor for diphenylamine detection based on reduced graphene oxide/Fe₃O₄- molecularly imprinted polymer with 1,4-butanediyl- 3,3'-bis-l-vinylimidazolium dihexafluorophosphate ionic liquid as cross-linker," *Polymers (Basel)*, **10** (2018) 1329.
- Liu, M. Chen, Q. Lai, C. Zhang, Y. Deng, J. Li, H. Yao, S. "A double signal amplification platform for ultrasensitive and simultaneous detection of ascorbic acid, dopamine, uric acid and acetaminophen based on a nanocomposite of ferrocene thiolate stabilized Fe₃O₄@Au nanoparticles with graphene sheet," *Biosens. Bioelectron*, **48** (2013) 75–81.
- Liu, X. Ma, R. Zhuang, L. Hu, B. Chen, J. Liu, X. Wang, X. "Recent developments of doped g-C₃N₄ photocatalysts for the degradation of organic pollutants," *Critical Reviews in Environmental Science and Technology*, **51** (2020) 751-790.
- Lu, L. Sun, R. W. Y. Chen, R. Hui, C. K. Ho, C. M. Luk, J. M. Lau, G. K. Che, C. M. "Silver nanoparticles inhibit hepatitis B virus replication," *Antiviral therapy*, **13**(2) (2008) 253-262.
- Luo, X. L. Xu, J. J. Zhao, W. Chen, H. Y. "Glucose biosensor based on ENFET doped with SiO₂ nanoparticles," *Sensors and Actuators: B chemical*, **97** (2004) 249–255.
- Malhotra, B. D. Kumar, S. Pandey, C. M. "Nanomaterials based biosensors for cancer biomarker detection," *In Journal of Physics: Conference Series*, **704** (2016) 012011.

- Malhotra, R. Siew, E. D. "Biomarkers for the Early Detection and Prognosis of Acute Kidney Injury," *Clin J Am Soc Nephrol*, **12** (1) (2017) 149-173.
- Martín, A. Hernández-Ferrer, J. Vázquez, L. Martínez, M. T. Escarpa, A. "Controlled chemistry of tailored graphene nanoribbons for electrochemistry: a rational approach to optimizing molecule detection," *RSC Adv*, **4** (2014) 132-139.
- Massey, A. T. Gusain, R. Kumari, S. Khatri, O. P. "Hierarchical Microspheres of MoS₂ Nanosheets: Efficient and Regenerative Adsorbent for Removal of Water-Soluble Dyes," *Ind. Eng. Chem. Res*, **55** (2016) 7124–7131.
- Meng, H. Yang, D. Tu, Y. Yan, J. "Turn-on fluorescence detection of ascorbic acid with gold nanoclusters," *Talanta*, **165** (2017) 346–350.
- Mobed, A. Hasanzadeh, M. Shadjou, N. Hassanpour, S. Saadati, A. Agazadeh, M. "Immobilization of ssDNA on the surface of silver nanoparticles-graphene quantum dots modified by gold nanoparticles towards biosensing of microorganism," *Microchemical Journal*, **152** (2020) 104286.
- Mohamed, A. "Synthesis, Characterization, and Applications Carbon Nanofibers," *In Carbon-Based Nanofillers and Their Rubber Nanocomposites*, Elsevier, (2019) 243-257.
- Morrison, D. W. G. Dokmeci, M. R. Demirci, U. T. K. A. N. Khademhosseini, A. "Clinical applications of micro-and nanoscale biosensors," *Biomedical nanostructures*, **1** (2007) 439-460.
- Mostafa, I. M. Halawa, M. I. Chen, Y. Abdussalam, A. Guan, Y. Xu, G. "Silicotungstic acid as a highly efficient coreactant for luminol chemiluminescence for sensitive detection of uric acid," *Analyst*, 145(7) (2020) 2709–2715.
- Navadeepthy, D. Rebekah, A. Viswanathan, C. Ponpandian, N. "N-doped Graphene/ZnFe₂O₄: a novel nanocomposite for intrinsic peroxidase based sensing of H₂O₂," *Mater. Res. Bull*, **95** (2017) 1-8.
- Ni, P. Jiang, D. Chen, C. Jiang, Y. Lu, Y. Zhao, Z. "Highly sensitive fluorescent detection of glutathione and histidine based on the Cu(ii)-thiamine system," *Analyst*, **143** (2018) 4442–4447.
- Ni, P. Sun, Y. Dai, H. Hu, J. Jiang, S. Wang, Y. Li, Z. "Highly sensitive and selective colorimetric detection of glutathione based on Ag [I] ion-3,3',5,5'-tetramethylbenzidine (TMB)," *Biosens. Bioelectron*, **63** (2015) 47–52.

- Nicolini, V. Gambuzzi, E. Malavasi, G. Menabue, L. Menziani, M. C. Lusvardi, G. Pedone, A. Benedetti, F. Luches, P. D'Addato, S. Valeri, S. "Evidence of catalase mimetic activity in Ce³⁺/Ce⁴⁺ doped bioactive glasses," *The Journal of Physical Chemistry B*, **119(10)** (2015) 4009-4019.
- Nirala, N. R. Abraham, S. Kumar, V. Bansal, A. Srivastava, A. Saxena, P. S. "Colorimetric detection of cholesterol based on highly efficient peroxidase mimetic activity of graphene quantum dots, Sensors Actuators," *B Chem*, **218** (2015) 42–50.
- Nirala, N. R. Khandelwal, G. Kumar, B. Vinita, Prakash, R. Kumar, V. "One step electro-oxidative preparation of graphene quantum dots from wood charcoal as a peroxidase mimetic," *Talanta*, **173** (2017) 36–43.
- Niu, L.Y. Chen, Y.Z. Zheng, H.R. Wu, L.Z. Tung, C.H. Yang, Q. Z. "Design strategies of fluorescent probes for selective detection among biothiols," *Chem. Soc. Rev*, **44** (2015) 6143–6160.
- Nyaruaba, R. Zhang, B. Muema, C. "Development of a new field-deployable RT-qPCR workflow for COVID-19 detection," *Life Res*, **4(3)** (2021) 27.
- Oh, H. J. Yeang, B. J. Park, Y. K. Choi, H. J. Kim, J. H. Kang, Y. S. Bae, Y. Kim, Y. J. Lim, J. S. Lee, W. Hahm, W. G. "Washable Colorimetric Nanofiber Nonwoven for Ammonia Gas Detection," *Polymers*, **12** (2020) 1585-1596.
- Ojha, R. P. Mishra, R. Singh, P. Nirala, N. R. Prakash, R. "A composite prepared from MoS₂ quantum dots and silver nanoparticles and stimulated by mercury(II) is a robust oxidase mimetic for use in visual determination of cysteine," *Microchim. Acta*, **187** (2020) 74-82.
- Ojha, R. P. Pal, S. Prakash, R. "Cu-Fe Prussian blue analog nanocube with intrinsic oxidase mimetic behaviour for the non-invasive colorimetric detection of Isoniazid in human urine," *Michrochem. J*, **171** (2021) 106854.
- Pang, H. L. Lu, J. P. Chen, J. H. Huang, C. T. Liu, B. Zhang, X. H. "Preparation of SnO₂-CNTs supported Pt catalysts and their electrocatalytic properties for ethanol oxidation," *Electrochim Acta*, **54** (2009) 2610-2615.
- Periasamy, A. P. Roy, P. Wu, W. P. Huang, Y. H. Chang, H. T. "Glucose oxidase and horseradish peroxidase like activities of cuprous oxide/polypyrrole composites," *Electrochimica Acta*, **215** (2016) 253-260.

- Perry, R. R. Mazetta, J. Levin, M. Barranco, S. C. "Glutathione levels and variability in breast tumors and normal tissue," *Cancer*, **72** (1993) 783–787.
- Piriya V. S, A. Joseph, P. Daniel S. C. G, K. Lakshmanan, S. Kinoshita, T. Muthusamy, S. "Colorimetric sensors for rapid detection of various analytes," *Materials Science and Engineering: C*, **78** (2017) 1231–1245.
- Qin, W. Su, L. Yang, C. Ma, Y. Zhang, H. Chen, X. "Colorimetric Detection of Sulfite in Foods by a TMB-O₂-Co₃O₄ Nanoparticles Detection System," *J. Agric. Food Chem*, **62** (2014) 5827–5834.
- Qiu, S. Lin, Z. Zhou, Y. Wang, D. Yuan, L. Wei, Y. Dai, T. Luo, L. Chen, G., "Highly selective colorimetric bacteria sensing based on protein-capped nanoparticles," *Analyst*, **140** (2015) 1149.
- Rahban, M. Divsalar, A. Saboury, A. A. Golestani, A. "Nanotoxicity and spectroscopy studies of silver nanoparticle: Calf thymus DNA and K562 as targets," *The Journal of Physical Chemistry C*, **114(13)** (2010) 5798-5803.
- Rahman, I. Kode, A. Biswas, S. K. "Assay for quantitative determination of glutathione and glutathione disulfide levels using enzymatic recycling method," *Nat. Protoc*, **1** (2007) 3159–3165.
- Ramirez-Castro, C. Schütter, C. Passerini, S. Balducci, A. "Microporous carbonaceous materials prepared from biowaste for supercapacitor application," *Electrochim. Acta*, **206** (2016) 452–457.
- Ramsden J. "Carbon-Based Nanomaterials and Devices in Nanotechnology," *wiley online library*, (2011).
- Ray, S. Biswas, R. Banerjee, R. Biswas, P. "A gold nanoparticle-intercalated mesoporous silica-based nanozyme for the selective colorimetric detection of dopamine," *Nanoscale Adv*, **2** (2020) 734-745.
- Rezaei, B. Ghani, M. Shoushtari, A. M. Rabiee, M. "Electrochemical biosensors based on nanofibres for cardiac biomarker detection: A comprehensive review," *Biosensors and Bioelectronics*, **78** (2016) 513-523.
- Romodin, L. A. "Chemiluminescence Detection in the Study of Free-Radical Reactions. Part 2. Luminescent Additives That Increase the Chemiluminescence Quantum Yield," *Acta Naturae*, **14(1)** (2022) 31.

- Sabzehei, M. M. Mahnaee, S. Ghaedi, M. Heidari, H. Roy, V. A. L. "Carbon-based materials: a review of adsorbents for inorganic and organic compounds," *Mater. Adv.*, **2** (2021) 598-627.
- Sanchez, A. B. Giussani, A. Rubioc, M. Roca-Sanjuán, D. "On the chemiluminescence emission of luminol: protic and aprotic solvents and encapsulation to improve the properties in aqueous solution," *Phys. Chem. Chem. Phys.*, **22** (2020) 27617.
- Sandrock, M. L. El-Kouedi, M. Gluodenis, M. Foss, C. A. "Optical properties of nanoparticle pair structures," *MRS Online Proceedings Library (OPL)*, (2001) 635.
- Sant, W. Pourcel, M. L. Launay, J. Do Conto, T. Martinez, A. Temple-Boyer, P. "Development of chemical field effect transistors for the detection of urea," *Sensors and Actuators: B chemical*, **95** (2003) 309–314.
- Santhanam, K. S. V. Krishnan, V. R. "Estimation of Ascorbic Acid by Controlled Potential Coulometry," *Anal. Chem.*, **33** (1961) 1493–1495.
- Sapner, V. S. Sathe, B. R. "Metal-free graphene-based nanoelectrodes for the electrochemical determination of ascorbic acid (A.A.) and *p*-nitrophenol (*p*-NP): implication towards biosensing and environmental monitoring," *New J. Chem.*, **45** (2021) 4666-4674.
- Saxena, A. Tripathi, R. M. Zafar, F. Singh, P. "Green synthesis of silver nanoparticles using aqueous solution of *Ficus benghalensis* leaf extract and characterization of their antibacterial activity," *Materials Letters*, **67(1)** (2012) 91-94.
- Shen, C. L. Zheng, G. S. Wu, M. Y. Wei, J. Y. Lou, Q. Ye, Y. L. Liu, Z. Y. Zang, J. H. Dong, L. Shan, C. X. "Chemiluminescent carbon nanodots as sensors for hydrogen peroxide and glucose," *Nanophotonics*, **9(11)** (2020) 3597-3604.
- Sheng, Y. Yang, H. Wang, Y. Han, L. Zhao, Y. Fan, A. "Silver nanoclusters-catalyzed luminol chemiluminescence for hydrogen peroxide and uric acid detection," *Talanta*, **166**, (2017) 268-274.
- Shetti, N. P. Nayak, D. S. Reddy, K. R. Aminabhvi, T. M. "Graphene-clay-based hybrid nanostructures for electrochemical sensors and biosensors," *Graphene-based electrochemical sensors for biomolecules. Elsevier*, (2019) 235-274.

- Shi, B. Su, Y. Duan, Y. Chen, S. Zuo, W. "A nanocomposite prepared from copper (II) and nitrogen-doped graphene quantum dots with peroxidase mimicking properties for chemiluminescent determination of uric acid," *Microchimica Acta*, **186(7)** (2019) 1-10.
- Shi, W. Wang, Q. Long, Y. Cheng, Z. Chen, S. Zheng, H. Huang, Y. "Carbon nanodots as peroxidase mimetics and their applications to glucose detection," *ChemComm (Camb)*, **47** (2011) 6695–7.
- Shin, Y. H. Gutierrez-Wing, M. T. Choi, J. W. "Recent progress in portable fluorescence sensors," *Journal of the Electrochemical Society*, **168(1)** (2021) 017502.
- Shu, H. Luo, P. Liang, P. Cao, D. Chen, X. "Layer-dependent dopant stability and magnetic exchange coupling of iron-doped MoS₂ nanosheets," *ACS applied materials & interfaces*, **7(14)** (2015) 7534-7541.
- Shu, X. Chang, Y. Wen, H. Yao, X. Wang, Y. "Colorimetric determination of ascorbic acid based on carbon quantum dots as peroxidase mimetic enzyme," *RSC Adv.* **10** (2020) 14953–14957.
- Singh, P. Ojha, R. P. Kumar, S. Singh, A. K. Prakash, R. "Fe-doped MoS₂ nanomaterials with amplified peroxidase mimetic activity for the colorimetric detection of glutathione in human serum," *Mater. Chem. Phys.*, **267** (2021) 224684.
- Singh, R. Umapathi, A. Patel, G. Patra, C. Malik, U. Bhargava, S. K. Daima, H. K. "Nanozyme-based pollutant sensing and environmental treatment: Trends, challenges, and perspectives," *Science of The Total Environment*, **854** (2023) 158771.
- Song, Y. Gong, C. Su, D. Shen, Y. Song, Y. Wang, L. "A novel ascorbic acid electrochemical sensor based on spherical MOF-5 arrayed on a three-dimensional porous carbon electrode," *Anal. Methods*, **8** (2016) 2290–2296.
- Stasyuk, N. Smutok, O. Demkiv, O. Prokopiv, T. Gayda, G. Nisnevitch, M. Gonchar, M. "Synthesis, catalytic properties and application in biosensorics of nanozymes and electronanocatalysts: A review," *Sensors*, **20(16)** (2020) 4509.
- Sun, Y. He, W. Sun, X. Liu, B. "MoS₂ quantum dots as a specific fluorescence sensor for selection of rutin and for temperature sensing," *Luminescence*, **35** (2020) 1416–1423.
- Swager, T.M. Mirica, K.A. "Introduction: Chemical Sensors," *Chem. Rev.*, **119** (2019) 1–2.
- Tan, B. Zhao, H. Wu, W. Liu, X. Zhang, Y. Quan, X. "Fe₃O₄-AuNPs anchored 2D metal-

- organic framework nanosheets with DNA regulated switchable peroxidase-like activity," *Nanoscale*, **9** (2017) 18699–18710.
- Tan, Q. Zhang, R. Kong, R. Kong, W. Zhao, W. Qu, F. "Detection of glutathione based on MnO₂ nanosheet-gated mesoporous silica nanoparticles and target induced release of glucose measured with a portable glucose meter," *Microchim. Acta*. **185** (2018) 1–7.
- tathione detection by using MnO₂ nanosheets assisted aggregation-induced emission-silica nanospheres," *Talanta*, **169** (2017) 1–7.
- Tcherkas, Y. V. Denisenko, A. D. "Simultaneous determination of several amino acids, including homocysteine, cysteine and glutamic acid, in human plasma by isocratic reversed-phase high-performance liquid chromatography with fluorimetric detection," *J. Chromatogr. A*, **913** (2001) 309–313.
- Tshabalala, Z. P. Oosthuizen,D. N. Swart, H. C. Motaung, D. E. "Tools and techniques for characterization and evaluation of nanosensors," *In Nanosensors for Smart Cities*.Elsevier, (2020) 85-110.
- Verma, C. J. Kumar, A. Pal, S. Sinha, S. Singh, A. K. Jaiswal, A. Prakash, R. "Polyaniline stabilized activated carbon from *Eichhornia Crassipes*: Potential charge storage material from bio-waste," *Renew. Energy*, **162** (2020) 2285-2296.
- Vinita, Nirala, N. R. Prakash, R. "One-step synthesis of AuNPs@MoS₂-QDs composite as a robust peroxidase- mimetic for instant unaided eye detection of glucose in serum, saliva and tear," *Sens. Actuators B Chem*, **263** (2018) 109-119.
- Vinita, Tiwari, M. Prakash, R. "Colorimetric detection of picric acid using silver nanoparticles modified with 4-amino-3-hydrazino-5-mercaptop-1,2,4-triazole," *Appl. Surf. Sci.*, **449** (2018) 174–180.
- Wang, B. Liu, F. Wu, Y. Chen, Y. Weng, B. Li, C. M. "Synthesis of catalytically active multielement-doped carbon dots and application for colorimetric detection of glucose," *Sen. Actuators B Chem*, **255** (2018) 2601-2607.
- Wang, C. Halawa, M. I. Lou, B. Gao, W. Li, J. Xu, G. "Detection of ascorbic acid based on its quenching effect on luminol–artemisinin chemiluminescence," *Analyst*, **146** (2021) 1981-1985.

- Wang, R. Yue, N. Fan, A. "Nanomaterial-enhanced chemiluminescence reactions and their applications," *Analyst*, **145(23)** (2020) 7488-7510.
- Wang, W. Jin, W. "Determination of Glutathione in a Single Human Hepatocarcinoma Cell Using a Microfluidic Device Coupled with Electrochemical Detection," *Chinese J. Chromatogr.* **25** (2007) 799–803.
- Wang, W. Li, L. Liu, S. Ma, C. Zhang, S. "Determination of physiological thiols by electrochemical detection with piazselenole and its application in rat breast cancer cells 4T-1," *J. Am. Chem. Soc.*, **130** (2008) 10846–10847.
- Wang, Y. Ni, Y. "Molybdenum disulfide quantum dots as a photoluminescence sensing platform for 2,4,6-trinitrophenol detection," *Anal. Chem.*, **86** (2014) 7463–7470.
- Wang, Y. Z. Zhong, H. Li, X. R. Liu, G. Q. Yang, K. Ma, M. Zhang, L. L. Yin, J. Z. Cheng, Z. P. Wang, J. K. "Nonenzymatic electrochemiluminescence glucose sensor based on quenching effect on luminol using attapulgite–TiO₂," *Sensors and Actuators B: Chemical*, **230** (2016) 449-455.
- Wei, H. Wang, E. "Fe₃O₄ magnetic nanoparticles as peroxidase mimetics and their applications in H₂O₂ and glucose detection," *Analytical Chemistry*, **80 (6)** (2008) 2250–2254.
- Wen, X. Yu, P. Toh, Y.R. Lee, Y.C. Huang, K.Y. Huang, S. Shrestha, S. Conibeer, G. Tang, J. "Ultrafast electron transfer in the nanocomposite of the graphene oxide-Au nanocluster with graphene oxide as a donor," *J. Mater. Chem. C*, **2** (2014) 3826-3834.
- Wu, J. Wang, X. Wang, Q. Lou, Z. Li, S. Zhu, Y. Qin, L. Wei, H. "Nanomaterials with enzyme-like characteristics (nanozymes): Next-generation artificial enzymes (II)," *Chem. Soc. Rev.*, **48** (2019) 1004–1076.
- Wu, N. Wang, Y. T. Wang, X. Y. Guo, F. N. Wen, H. Yang, T. Wang, J. H. "Enhanced peroxidase-like activity of AuNPs loaded graphitic carbon nitride nanosheets for colorimetric biosensing," *Analytica chimica acta*, **1091** (2019) 69-75.
- Wu, Q. Chen, H. Fang, A. Wu, X. Liu, M. Li, H. Zhang, Y. Yao, S. "A Universal Multifunctional Nanoplatform Based on Target-Induced in Situ Promoting Au Seeds Growth to Quench Fluorescence of Upconversion Nanoparticles," *ACS Sens.*, **2** (2017) 1805–1813.

- Wu, T. Hou, W. Ma, Z. Liu, M. Liu, X. Zhang, Y. Yao, S. "Colorimetric determination of ascorbic acid and the activity of alkaline phosphatase based on the inhibition of the peroxidase-like activity of citric acid-capped Prussian Blue nanocubes," *Microchimica Acta*, **186** (2019) 123.
- Wulff, G. "Enzyme-like Catalysis by Molecularly Imprinted Polymers," *Chemical Reviews*, **102 (1)** (2002) 1–28.
- Xi, Z. Wei, K. Wang, Q. Kim, M. J. Sun, S. Fung, V. Xia, X. "Nickel–Platinum Nanoparticles as Peroxidase Mimics with a Record High Catalytic Efficiency," *J. Am. Chem. Soc.*, **143** (2021) 2660–2664.
- Xia, X. Zhang, J. Lu, N. Kim, M. J. Ghale, K. Xu, Y. McKenzie, E. Liu, J. Ye, H. "Pd–Ir core–shell nanocubes: a type of highly efficient and versatile peroxidase mimic," *Acs Nano*, **9(10)** (2015) 9994–10004.
- Xianyu, Y. Xie, Y. Wang, N. Wang, Z. Jiang, X. "A Dispersion-Dominated Chromogenic Strategy for Colorimetric Sensing of Glutathione at the Nanomolar Level Using Gold Nanoparticles," *Small*, **11** (2015) 5510–5514.
- Xie, W. Tian, M. Luo, X. Jiang, Y. He, N. Liao, X. Liu, Y. "A dual-mode fluorescent and colorimetric immunoassay based on in situ ascorbic acid-induced signal generation from metal-organic frameworks," *Sens. Actuators B Chem.*, **302** (2020) 127180-127186.
- Xu, S. L. Cui, H. "Luminol chemiluminescence catalysed by colloidal platinum nanoparticles," *Luminescence: The journal of biological and chemical luminescence*, **22(2)** (2007) 77–87.
- Xue, Q. Niu, X. Liu, P. Wang, M. Peng, Y. Peng, H. Li, X. "Analyte-triggered citrate-stabilized Au nanoparticle aggregation with accelerated peroxidase-mimicking activity for catalysis-based colorimetric sensing of arsenite" *Sensors and Actuators B: Chemical*, **334** (2021) 129650.
- Yamashita, T. Hayes, P. "Analysis of XPS spectra of Fe²⁺ and Fe³⁺ ions in oxide materials," *Appl. Surf. Sci.*, **254** (2008) 2441-2449.
- Yang, H. Liu, J. Feng, X. Nie, F. Yang, G. "A novel copper-based metal-organic framework as a peroxidase-mimicking enzyme and its glucose chemiluminescence sensing application," *Analytical and Bioanalytical Chemistry*, **413(17)** (2021) 4407-4416.

- Yang, J. Yu, J. H. Strickler, J. R. Chang, W. J. Gunasekaran, S. "Nickel nanoparticle-chitosan-reduced graphene oxide-modified screen-printed electrodes for enzyme-free glucose sensing in portable microfluidic devices," *Biosensors and Bioelectronics*, **47** (2013) 530-538.
- Yang, L. Liu, X. Lu, Q. Huang, N. Liu, M. Zhang, Y. Yao, S. "Catalytic and peroxidase-like activity of carbon based-AuPd bimetallic nanocomposite produced using carbon dots as the reductant," *Anal. Chim. Acta*, **930** (2016) 23–30.
- Yokokura, T. J. Rodriguez, J. R. Pol, V. G. "Waste Biomass-Derived Carbon Anode for Enhanced Lithium Storage," *ACS Omega*. **31** (2020) 19715-19720.
- Yuan, W. Edwards, J. L. "Thiol metabolomics of endothelial cells using capillary liquid chromatography mass spectrometry with isotope coded affinity tags," *J. Chromatogr. A*, **1218** (2011) 2561–2568.
- Zeng, D. Luo, W. Li, J. Liu, H. Ma, H. Huang, Q. Fan, C. "Gold nanoparticles-based nanoconjugates for enhanced enzyme cascade and glucose sensing," *Analyst*, **137(19)** (2012) 4435-4439.
- Zhan, X. Tang, Y. Liu, Y. Tao, H. Wu, Y. "A novel colorimetric strategy for rapid detection of dimethoate residue in vegetables based on enhancing oxidase-mimicking catalytic activity of cube-shape Ag₂O particles," *Sensors and Actuators B: Chemical*, **361** (2022) 131720.
- Zhang, A. Guo, W. Ke, H. Zhang, X. Zhang, H. Huang, C. Yang, D. Jia, N. Cui, D. "Sandwich-format ECL immunosensor based on Au star@ BSA-Luminol nanocomposites for determination of human chorionic gonadotropin," *Biosensors and Bioelectronics*, **101** (2018) 219–226.
- Zhang, G. Xiang, M.H. Kong, R.M. Qu, F. "Fluorescent and colorimetric determination of glutathione based on the inner filter effect between silica nanoparticle-gold nanocluster nanocomposites and oxidized 3,3',5,5'-tetramethylbenzidine," *Analyst*, **145** (2020) 6254–6261.
- Zhang, H. Liu, S. "Mixing concentrated sulfuric acid and diethylenetriamine at room temperature: A rapid and facile approach to synthesize fluorescent carbon polymer hollow spheres as peroxidase mimics," *J. Colloid. Interface Sci*, **582** (2021) 405–411.
- Zhang, J. W. Zhang, H. T. Du, Z. Y. Wang, X. Yu, S. H. Jiang, H. L. "Water-stable metal-

- organic frameworks with intrinsic peroxidase-like catalytic activity as a colorimetric biosensing platform," *Chemical Communications*, **50** (2014) 1092-1094.
- Zhang, L. P. Hu, B. Wang, J. H. "Label-free colorimetric sensing of ascorbic acid based on Fenton reaction with unmodified gold nanoparticle probes and multiple molecular logic gates," *Anal. Chim. Acta*, **717** (2012) 127– 133.
- Zhang, M. Qing, G. Xiong, C. Cui, R. Pang, D.W. Sun, T. "Dual-Responsive Gold Nanoparticles for Colorimetric Recognition and Testing of Carbohydrates with a Dispersion-Dominated Chromogenic Process," *Adv. Mater*, **25** (2013) 749–754.
- Zhang, S. Li, R. Liu, X. Yang, L. Lu, Q. Liu, M. Li, H. Zhang, Y. Yao, S. "A novel multiple signal amplifying immunosensor based on the strategy of in situ-produced electroactive substance by ALP and carbon-based Ag-Au bimetallic as the catalyst and signal enhancer," *Biosens. Bioelectron*, **92** (2017) 457–464.
- Zhang, X. Kong, R. Tan, Q. Qu, F. Qu, F. "A label-free fluorescence turn-on assay for glutathione detection by using MnO₂ nanosheets assisted aggregation-induced emission-silica nanospheres," *Talanta*, **169** (2017) 1–7.
- Zhang, Z. F. Cui, H. Lai, C. Z. Liu, L. J. "Gold nanoparticle-catalyzed luminol chemiluminescence and its analytical applications," *Analytical chemistry*, **77(10)** (2005) 3324–3329.
- Zhao, C. Cui, H. Duan, J. Zhang, S. Lv, J. "Self-catalyzing chemiluminescence of luminol-diazonium ion and its application for catalyst-free hydrogen peroxide detection and rat arthritis imaging," *Analytical chemistry*, **90(3)** (2018) 2201–2209.
- Zhao, K. Gu, W. Zheng, S. Zhang, C. Xian, Y. "SDS–MoS₂ nanoparticles as highly-efficient peroxidase mimetics for colorimetric detection of H₂O₂ and glucose," *Talanta*, **141** (2015) 47–52.
- Zhao, L. Jia, J. Yang, Z. Yu, J. Wang, A. Sang, Y. Zhou, W. Liu, H. "One-step synthesis of CdS nanoparticles/MoS₂ nanosheets heterostructure on porous molybdenum sheet for enhanced photocatalytic H₂ evolution," *Appl. Catal. B Environ*, **210** (2017).
- Zheng, A. X. Cong, Z. X. Wang, J. R. Li, J. Yang, H. H. Chen, G. N. "Highly-efficient peroxidase-like catalytic activity of graphene dots for biosensing," *Biosens. Bioelectron*, **49** (2013) 519–24.
- Zheng, X. Duan, C. Shen, J. Duan, X. "Determination of reduced glutathione by

- spectrophotometry coupled with anti-interference compensation," *Anal. Methods*, **7** (2015) 5006–5011.
- Zhou, D. Zeng, K. Yang, M. "Gold nanoparticle-loaded hollow Prussian Blue nanoparticles with peroxidase-like activity for colorimetric determination of L-lactic acid," *Microchim. Acta*, **186** (2019) 1–7.
- Zhou, W. Apkarian, R. Wang, Z.L. and Joy, D. "Fundamentals of scanning electron microscopy (SEM)," *Scanning Microscopy for Nanotechnology: Techniques and Applications*, (2007) 1-40.
- Zhu, M. Tang, J. Tu, X. Chen, W. "Determination of Ascorbic Acid, Total Ascorbic Acid, and Dehydroascorbic Acid in Bee Pollen Using Hydrophilic Interaction Liquid Chromatography-Ultraviolet Detection," *Molecules*, **25** (2020) 5696-56105.
- Zhu, Q. Chen, Y. Wang, W. Zhang, H. Ren, C. Chen, H. Chen, X. "A sensitive biosensor for dopamine determination based on the unique catalytic chemiluminescence of metal-organic framework HKUST-1," *Sensors and Actuators B: Chemical*, **210** (2015) 500-507.
- Zhu, Q. Dong, D. Zheng, X. Song, H. Zhao, X. Chen, H. Chen, X. "Chemiluminescence determination of ascorbic acid using graphene oxide@copper-based metal-organic frameworks as a catalyst," *RSC Adv*, **6** (2016) 25047-25055.
- Zhu, S. Lei, C. Gao, Y. Sun, J. Peng, H. Gao, H. Zhang, R. Wang, R. Zhao, XE. Wang, H. "Simple and label-free fluorescence detection of ascorbic acid in rat brain microdialysates in the presence of catecholamines," *New J. Chem*, **42** (2018) 3851-3856.
- Zhu, W. Jiang, G. Xu, L. Li, B. Cai, Q. Jiang, H. Zhou, X. "Facile and controllable one-step fabrication of molecularly imprinted polymer membrane by magnetic field directed self-assembly for electrochemical sensing of glutathione," *Anal. Chim. Acta*, **886** (2015) 37–47.
- Zhu, Y. Wu, J. Wang, K. Xu, H. Qu, M. Gao, Z. Guo, L. Xie, J. "Facile and sensitive measurement of GSH/GSSG in cells by surface-enhanced Raman spectroscopy," *Talanta*, **224** (2021) 121852.
- Zong, C. Wu, J. Zang, Y. Ju, H. "Resonance energy transfer and electron-hole annihilation induced chemiluminescence of quantum dots for amplified immunoassay," *Chemical Communications*, **54(84)** (2018) 11861-11864.

List of Publications

1. **Priya Singh**, Ravi Prakash Ojha, Sandeep Kumar, Ashish Kumar Singh, Rajiv Prakash, “Fe doped MoS₂ nanomaterials with amplified peroxidase mimetic activity for the colorimetric detection of glutathione in human serum”, *Materials Chemistry and Physics*, **267** (2021), 124684.
 2. **Priya Singh**, Chandra Jeet Verma, Ravi Prakash Ojha, Rajiv Prakash, “Hierarchically porous 2D carbon from bio-waste: A sustainable, rapid, and efficient oxidase mimic for colorimetric detection of ascorbic acid”, *Material Advance*, **3(6)** (2022) 2749-2759.
 3. **Priya Singh**, Nupur Kumari, Narsingh Raw Nirala, Rajiv Prakash, “Smart phone based Non-Invasive Glucose monitoring in Diabetic patients utilizing Enhanced Chemiluminescence imaging Technique” (Revision).
 4. **Priya Singh**, Ravi Prakash Ojha, Subhajit Jana, Aniruddha Jaiswal, and Rajiv Prakash “Enhanced oxidase activity of Platinum decorated graphitic carbon nitride for the colorimetric detection of Ascorbic acid” (Communicated).
 5. Ravi Prakash Ojha, Richa Mishra, **Priya Singh**, Narsingh Raw Nirala, Rajiv Prakash, “A composite prepared from MoS₂ quantum dots and silver nanoparticles and stimulated by mercury(II) is a robust oxidase mimetic for use in visual determination of cysteine”, *Microchimica Acta*, **187(1)** (2019) 74.
 6. Ravi Prakash Ojha, **Priya Singh**, Uday Pratap Azad, Rajiv Prakash, “Impedimetric immunosensor for the NS1 Dengue Biomarker based on the Gold Nanorod Decorated Graphitic Carbon Nitride modified”, *Electrochimica Acta*, **411** (2022) 140069.
 7. Rajpal, Ashish Kumar, Subhajit Jana, **Priya Singh** and Rajiv Prakash, A fluorescent CeEDTA probe for the sensing of ascorbic acid and lysine in real samples, *Material Advances* (2022), <http://dx.doi.org/10.1039/D2MA00477A>.
-
-

List of Publications

8. Ravi Prakash Ojha, **Priya Singh**, Subhajit Jana, Rajiv Prakash “Gold nanoflower decorated MoSe₂ modified electrode for the electrochemical detection of free cholesterol.” (Communicated).
9. Vineet Kumar Mall, Ravi Prakash Ojha, **Priya Singh**, Rajiv Prakash, “Electrochemical detection of antimalarial drug Primaquine based on gold nanorod embedded MoS₂ nanosheets modified electrodes” (Communicated).

Book chapter

Ashish Kumar, **Priya Singh**, Rajiv Prakash, Enzymatic Electrode–Electrolyte Interface Study During Electrochemical Sensing of Biomolecules’ in John Wiley & Sons, Inc. 2020.

Patent

1. “Analyte Detection Based On Enhanced chemiluminescence and Smartphone Imaging in biological Fluids and Methods Thereof” and application no. 202111051598.
2. “A Non-Invasive Method of Detecting n-Acetyl-β-D-Glucosaminidase in Urine Samples and a Kit Thereof” and application no. 202211001892.

List of Symposium/Conference/Webinar

1. International Conference on “Advances in Polymer Science & Technology” (APA-2018) Kathmandu, Nepal, 2018. (Poster presentation).
2. Poster presentation entitled ‘The bare eye visual detection of glucose based on peroxidase mimetics activity of coordination polymer’ in Contemporary Trends and Future Prospects of Functional Materials (CTFM-2019).
3. Participated in the course of ‘Sakura Science Exchange Program’ administered by Japan Science and Technology Agency and ran by Kyushu Institute of Technology from December 2 to December 8 in 2019, Japan.
4. Poster presentation entitled ‘Rapid Colorimetric Detection of the Glutathione based on Peroxidase Mimetic Activity of 2D Material’ in 12th Japan-Korea Joint Symposium on Biomicrosensing Technology (12th JKBT)
5. 2nd Asian Symposium on Cutting-edge Biotechnology (ASCB), 6 December, 2019, Japan. (Oral presentation)
6. National conference on “Innovative Approaches Towards Sustainable Development” (NCIATSD-2020), K.N.P.G. College, Gyanpur, Bhadohi, U.P. (Poster Presentation).
7. International Web Conference on Advanced Material Science & Nanotechnology (NANOMAT-2020), June 2020. (Poster presentation)
8. Participated in ‘CSIR summer research training program (CSIR-SRTP) 2020’ in 2020 organized by CSIR-NEIST, Jorhat India.
9. International Conference on Advanced Materials for Better Tomorrow (AMBT-2021) organized by the Indian Institute of Technology (BHU), Varanasi in association with the Society for Interdisciplinary Research in Materials and Biology (SIRMB) in 2021. (Poster presentation)

List of Symposium/Conference/Webinar

10. International Conference on “Advances in Polymer Science & Technology” (APA-2023) International Centre Goa, 2023. (Poster presentation).
 11. Presented a paper (Oral) titled “Gold Nanorod Decorated Graphitic Carbon Nitride with Improved Electrochemical Properties for NS1 Dengue Biomarker Sensing) at 2nd International Conference on Multidisciplinary Academic Research and Innovation, on January 28-29, 2023