

Bibliography

- Abbaspour, A. and Ghaffarinejad, A. Electrocatalytic oxidation of l-cysteine with a stable copper–cobalt hexacyanoferrate electrochemically modified carbon paste electrode. *Electrochimica Acta*, 53(22):6643–6650, 2008.
- Adekunle, A. S., Farah, A. M., Pillay, J., Ozoemena, K. I., Mamba, B. B., and Agboola, B. O. Electrocatalytic properties of prussian blue nanoparticles supported on poly (m-aminobenzenesulphonic acid)-functionalised single-walled carbon nanotubes towards the detection of dopamine. *Colloids and Surfaces B: Biointerfaces*, 95:186–194, 2012.
- Adekunle, A. S., Mamba, B. B., Agboola, B. O., and Ozoemena, K. I. Nitrite electrochemical sensor based on prussian blue/single-walled carbon nanotubes modified pyrolytic graphite electrode. 2011.
- Ahmadalinezhad, A., Kafi, A., and Chen, A. Glucose biosensing based on the highly efficient immobilization of glucose oxidase on a prussian blue modified nanostructured surface. *Electrochemistry Communications*, 11(10):2048–2051, 2009.
- Aksoy, M., Nune, S. V. K., and Karadas, F. A novel synthetic route for the preparation of an amorphous co/fe prussian blue coordination compound with high electrocatalytic water oxidation activity. *Inorganic Chemistry*, 55(9):4301–4307, 2016.
- Alanko, J., Riutta, A., Holm, P., Mucha, I., Vapaatalo, H. and Metsä-Ketelä, T. Modulation of arachidonic acid metabolism by phenols: relation to their structure and antioxidant/prooxidant properties. *Free Radical Biology and Medicine*, 26(1-2), pp.193-201, 1999.
- Al-Kahtani, A. A. et al. Photocatalytic degradation of rhodamine b dye in wastewater using gelatin/cus/pva nanocomposites under solar light irradiation. *Journal of Biomaterials and Nanobiotechnology*, 8(01):66, 2017.
- Ameen, S., Park, D.-R., and Shin, H. S. Silicon nanowires arrays for visible light driven photocatalytic degradation of rose bengal dye. *Journal of Materials Science: Materials in Electronics*, 27(10):10460–10467, 2016.

- Ang, J. Q., Nguyen, B. T. T., and Toh, C.-S. A dual k^+ - na^+ selective prussian blue nanotubes sensor. *Sensors and Actuators B: Chemical*, 157(2):417–423, 2011.
- Antony, R., Manickam, S. T. D., Kollu, P., Chandrasekar, P., Karuppasamy, K., and Balakumar, S. Highly dispersed cu (ii), co (ii) and ni (ii) catalysts covalently immobilized on imine-modified silica for cyclohexane oxidation with hydrogen peroxide. *RSC advances*, 4(47):24820–24830, 2014.
- Arun, T., Prakash, K., Kuppasamy, R., and Joseyphus, R. J. Magnetic properties of prussian blue modified fe_3o_4 nanocubes. *Journal of Physics and Chemistry of Solids*, 74(12):1761–1768, 2013.
- Asati, A., Santra, S., Kaittanis, C., Nath, S., and Perez, J. M. Oxidase-like activity of polymer-coated cerium oxide nanoparticles. *Angewandte Chemie International Edition*, 48(13):2308–2312, 2009.
- Astruc, D., Lu, F., and Aranzas, J. R. Nanoparticles as recyclable catalysts: the frontier between homogeneous and heterogeneous catalysis. *Angewandte Chemie International Edition*, 44(48):7852–7872, 2005.
- Ayers, J. B. and Waggoner, W. H. Synthesis and properties of two series of heavy metal hexacyanoferrates. *Journal of Inorganic and Nuclear Chemistry*, 33(3):721–733, 1971.
- Aziz, K. H. H. Application of different advanced oxidation processes for the removal of chloroacetic acids using a planar falling film reactor. *Chemosphere*, 228:377–383, 2019.
- Aziz, K. H. H., Mahyar, A., Miessner, H., Mueller, S., Kalass, D., Moeller, D., Khorshid, I., and Rashid, M. A. M. Application of a planar falling film reactor for decomposition and mineralization of methylene blue in the aqueous media via ozonation, fenton, photocatalysis and non-thermal plasma: a comparative study. *Process Safety and Environmental Protection*, 113:319–329, 2018.
- Bai, J., Qi, B., Ndamani, J. C., and Guo, L.-p. Ordered mesoporous carbon-supported prussian blue: Characterization and electrocatalytic properties. *Microporous and mesoporous materials*, 119(1-3):193–199, 2009.

- Banazadeh, A., Salimi, H., Khaleghi, M., and Shafiei-Haghighi, S. Highly efficient degradation of hazardous dyes in aqueous phase by supported palladium nanocatalysts: a green approach. *Journal of environmental chemical engineering*, 4(2):2178–2186, 2016.
- Barbusiński, K. Fenton reaction-controversy concerning the chemistry. *Ecological Chemistry and Engineering. S*, 16(3):347–358, 2009.
- Begum, H., Ahmed, M.S., Cho, S. and Jeon, S. Freestanding palladium nanonetworks electrocatalyst for oxygen reduction reaction in fuel cells. *international journal of hydrogen energy*, 43(1), pp.229-238, 2018..
- Boxhoorn, G., Moolhuysen, J., Coolegem, J. G., and van Santen, R. A. Cyanometallates: an underestimated class of molecular sieves. *Journal of the Chemical Society, Chemical Communications*, (19):1305–1307, 1985.
- Boyer, A., Kalcher, K., and Pietsch, R. Voltammetric behavior of perborate on prussian-blue-modified carbon paste electrodes. *Electroanalysis*, 2(2):155–161, 1990.
- Bozorth, R., Williams, H., and Walsh, D. E. Magnetic properties of some orthoferrites and cyanides at low temperatures. *Physical Review*, 103(3):572, 1956.
- Buleandra, M., Rabinca, A.A., Mihailciuc, C., Balan, A., Nichita, C., Stamatina, I. and Ciucu, A.A. Screen-printed Prussian Blue modified electrode for simultaneous detection of hydroquinone and catechol. *Sensors and Actuators B: Chemical*, 203, pp.824-832, 2014.
- Buser, H., Ludi, A., Petter, W., and Schwarzenbach, D. Single-crystal study of prussian blue: $\text{Fe}_4[\text{Fe}(\text{CN})_6]_2 \cdot 14\text{H}_2\text{O}$. *Journal of the Chemical Society, Chemical Communications*, (23):1299–1299, 1972.
- Buser, H., Schwarzenbach, D., Petter, W., and Ludi, A. The crystal structure of prussian blue: $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3 \cdot 20\text{H}_2\text{O}$. *Inorganic chemistry*, 16(11):2704–2710, 1977.
- Calleja, G., Melero, J. A., Martinez, F., and Molina, R. Activity and resistance of iron-containing amorphous, zeolitic and mesostructured materials for wet peroxide oxidation of phenol. *Water Research*, 39(9):1741–1750, 2005.
- Camargo, P. H., Rodrigues, T. S., da Silva, A. G., and Wang, J. Controlled synthesis: nucleation

- and growth in solution. In *Metallic Nanostructures*, pages 49–74. Springer, 2015.
- Cao, M., Wu, X., He, X., and Hu, C. Shape-controlled synthesis of prussian blue analogue $[\text{Co}(\text{CN})_6]_2$ nanocrystals. *Chemical communications*, (17):2241–2243, 2005.
- Chai, D.F., Ma, Z., Yan, H., Qiu, Y., Liu, H., Guo, H.D. and Gao, G.G. Synergistic effect of sandwich polyoxometalates and copper–imidazole complexes for enhancing the peroxidase-like activity. *RSC advances*, 5(96), pp.78771–78779, 2015.
- Chen, C., Zhao, W., Li, J., Zhao, J., Hidaka, H., and Serpone, N. Formation and identification of intermediates in the visible-light-assisted photodegradation of sulforhodamine-B dye in aqueous TiO_2 dispersion. *Environmental science & technology*, 36(16):3604–3611, 2002.
- Chen, J. and Bai, J. Chemiluminescence flow sensor with immobilized reagent for the determination of pyrogallol based on potassium hexacyanoferrate (iii) oxidation. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 71(3):989–992, 2008.
- Chen, J., Wu, W., Huang, L., Ma, Q. and Dong, S. Self-Indicative Gold Nanozyme for H_2O_2 and Glucose Sensing. *Chemistry—A European Journal*, 25(51), pp.11940–11944, 2019.
- Chen, L.-C., Tseng, K.-S., and Ho, K.-C. General kinetic model for amperometric sensors based on prussian blue mediator and its analogs: Application to cysteine detection. *Electroanalysis: An International Journal Devoted to Fundamental and Practical Aspects of Electroanalysis*, 18(13-14):1313–1321, 2006.
- Chen, Q., Ji, F., Liu, T., Yan, P., Guan, W. and Xu, X. Synergistic effect of bifunctional Co-TiO_2 catalyst on degradation of Rhodamine B: Fenton-photo hybrid process. *Chemical engineering journal*, 229, pp.57–65, 2013.
- Chen, R., Zhang, Q., Gu, Y., Tang, L., Li, C., and Zhang, Z. One-pot green synthesis of prussian blue nanocubes decorated reduced graphene oxide using mushroom extract for efficient 4-nitrophenol reduction. *Analytica chimica acta*, 853:579–587, 2015.
- Chen, W., Chen, J., Feng, Y.-B., Hong, L., Chen, Q.-Y., Wu, L.-F., Lin, X.-H., and Xia, X.-H. Peroxidase-like activity of water-soluble cupric oxide nanoparticles and its analytical application for detection of hydrogen peroxide and glucose. *Analyst*, 137(7): 1706–1712, 2012a.

- Chen, X., Chen, Z., Tian, R., Yan, W., and Yao, C. Glucose biosensor based on three dimensional ordered macroporous self-doped polyaniline/prussian blue bicomponent film. *Analytica chimica acta*, 723:94–100, 2012b.
- Chi, Q. and Dong, S. Amperometric biosensors based on the immobilization of oxidases in a prussian blue film by electrochemical codeposition. *Analytica chimica acta*, 310(3):429–436, 1995.
- Chut, S. et al. Reagentless amperometric determination of hydrogen peroxide by silica sol–gel modified biosensor. *Analyst*, 122(11):1431–1434, 1997.
- Cinti, S., Cusenza, R., Moscone, D. and Arduini, F. based synthesis of Prussian Blue Nanoparticles for the development of whole blood glucose electrochemical biosensor. *Talanta*, 187, pp.59-64, 2018.
- Combes, R. and Haveland-Smith, R. A review of the genotoxicity of food, drug and cosmetic colours and other azo, triphenylmethane and xanthene dyes. *Mutation Research/Reviews in genetic toxicology*, 98(2):101–243, 1982.
- Coon, D. R., Amos, L. J., Bocarsly, A. B., and Fitzgerald Bocarsly, P. A. Analytical applications of cooperative interactions associated with charge transfer in cyanometalate electrodes: analysis of sodium and potassium in human whole blood. *Analytical chemistry*, 70(15):3137–3145, 1998.
- Cros, A., Saoudi, R., Hollinger, G., Hewett, C., and Lau, S. An x-ray photoemission spectroscopy investigation of oxides grown on $\text{Au} \times \text{Si}^{1-x}$ layers. *Journal of applied physics*, 67(4):1826–1830, 1990.
- Cui, L., Zhu, J., Meng, X., Yin, H., Pan, X., and Ai, S. Controlled chitosan coated prussianblue nanoparticles with the mixture of graphene nanosheets and carbon nanospheres as a redox mediator for the electrochemical oxidation of nitrite. *Sensors and Actuators B: Chemical*, 161(1):641–647, 2012.
- Cui, W., An, W., Liu, L., Hu, J., and Liang, Y. Synthesis of cds/biobr composite and its enhanced photocatalytic degradation for rhodamine b. *Applied surface science*, 319: 298–305, 2014.
- Datta, M. and Datta, A. In situ FTIR and XPS studies of the hexacyanoferrate redox system. *Journal*

of Physical Chemistry, 94(21), pp.8203-8207, 1990.

Daubinger, P., Kieninger, J., Unmüßig, T., and Urban, G. A. Electrochemical characteristics of nanostructured platinum electrodes—a cyclic voltammetry study. *Physical Chemistry Chemical Physics*, 16(18):8392–8399, 2014.

Davidson, D. and Welo, L. A. The nature of prussian blue. *The Journal of Physical Chemistry*, 32(8):1191–1196, 2002.

de Mattos, I. L., Gorton, L., and Ruzgas, T. Sensor and biosensor based on prussian blue modified gold and platinum screen printed electrodes. *Biosensors and Bioelectronics*, 18(2-3):193–200, 2003.

de Mattos, I. L., Gorton, L., Laurell, T., Malinauskas, A., and Karyakin, A. A. Development of biosensors based on hexacyanoferrates. *Talanta*, 52(5):791–799, 2000.

de Tacconi, N. R., Rajeshwar, K., and Lezna, R. O. Metal hexacyanoferrates: electro-synthesis, in situ characterization, and applications. *Chemistry of Materials*, 15(16): 3046–3062, 2003.

Doña Rodríguez, J. M., Herrera Melián, J. A., and Pérez Peña, J. Determination of the real surface area of Pt electrodes by hydrogen adsorption using cyclic voltammetry. *Journal of Chemical Education*, 77(9):1195, 2000.

Dostal, A., Meyer, B., Scholz, F., Schroeder, U., Bond, A. M., Marken, F., and Shaw, S. J. Electrochemical study of microcrystalline solid prussian blue particles mechanically attached to graphite and gold electrodes: electrochemically induced lattice reconstruction. *The Journal of Physical Chemistry*, 99(7):2096–2103, 1995.

Doumic, L. I., Salierno, G. L., Cassanello, M. C., Haure, P. M., and Ayude, M. A. Prussian blue onto activated carbon as a catalyst for heterogeneous fenton-like processes. 2013.

Doumic, L. I., Salierno, G., Ramos, C., Haure, P. M., Cassanello, M. C., and Ayude, M. A. Soluble vs. insoluble prussian blue based catalysts: influence on fenton-type treatment. *RSC advances*, 6(52):46625–46633, 2016.

Drozd, M., Pietrzak, M., Parzuchowski, P.G. and Malinowska, E. Pitfalls and capabilities of various hydrogen donors in evaluation of peroxidase-like activity of gold

- nanoparticles. *Analytical and bioanalytical chemistry*, 408(29), pp.8505-8513, 2016.
- Du, J., Wang, Y., Zhou, X., Xue, Z., Liu, X., Sun, K., and Lu, X. Improved sensing in physiological buffers by controlling the nanostructure of prussian blue films. *The Journal of Physical Chemistry C*, 114(35):14786–14793, 2010.
- Düssel, H., Dostal, A., and Scholz, F. Hexacyanoferrate-based composite ion-sensitive electrodes for voltammetry. *Fresenius' journal of analytical chemistry*, 355(1):21–28, 1996.
- Dunford, H. B. and Hasinoff, B. B. Kinetics of the oxidation of ferrocyanide by horseradish peroxidase compounds i and ii. *Biochemistry*, 9(25):4930–4939, 1970.
- Durand, P., Fornasieri, G., Baumier, C., Beaunier, P., Durand, D., Rivière, E., and Bleuzen, A. Control of stoichiometry, size and morphology of inorganic polymers by template assisted coordination chemistry. *Journal of Materials Chemistry*, 20(42):9348–9354, 2010.
- Dutta, A. K., Maji, S. K., Srivastava, D. N., Mondal, A., Biswas, P., Paul, P., and Adhikary, B. Peroxidase-like activity and amperometric sensing of hydrogen peroxide by Fe_2O_3 and prussian blue-modified Fe_2O_3 nanoparticles. *Journal of Molecular Catalysis A: Chemical*, 360:71–77, 2012.
- Dutta, D., Chatterjee, S., Pillai, K., Pujari, P., and Ganguly, B. Pore structure of silica gel: a comparative study through BET and PALS. *Chemical Physics*, 312(1-3):319–324, 2005.
- Eftekhari, A. A high-voltage solid-state secondary cell based on chromium hexacyanometallates. *Journal of power sources*, 117(1-2):249–254, 2003.
- Eftekhari, A. Electrochemical behavior of gallium hexacyanoferrate film directly modified electrode in a cool environment. *Journal of The Electrochemical Society*, 151(9), p.E297, 2004.
- Eftekhari, A. Fabrication of all-solid-state thin-film secondary cells using hexacyanometallate-based electrode materials. *Journal of power sources*, 132(1-2):291–295, 2004.
- Einaga, Y., Sato, O., Iyoda, T., Fujishima, A., and Hashimoto, K. Photofunctional vesicles containing prussian blue and azobenzene. *Journal of the American Chemical Society*, 121(15):3745–3750, 1999.
- Ellis, D., Eckhoff, M. and Neff, V.D. Electrochromism in the mixed-valence hexacyanides. 1. Voltammetric and spectral studies of the oxidation and reduction of thin films of Prussian

- blue. *The Journal of Physical Chemistry*, 85(9), pp.1225-1231, 1981.
- Enami, S., Sakamoto, Y. and Colussi, A.J. Fenton chemistry at aqueous interfaces. *Proceedings of the National Academy of Sciences*, 111(2), pp.623-628, 2014.
- Estelrich, J. and Busquets, M.A. Prussian blue: A safe pigment with zeolitic-like activity. *International Journal of Molecular Sciences*, 22(2), p.780, 2021.
- Fan, M.F., Wang, H.M., Nan, L.J., Wang, A.J., Luo, X., Yuan, P.X. and Feng, J.J. The mimetic assembly of cobalt prot-porphyrin with cyclodextrin dimer and its application for H₂O₂ detection. *Analytica chimica acta*, 1097, pp.78-84, 2020.
- Farah, A., Billing, C., Dikio, C., Dibofori-Orji, A., Oyedeji, O., Wankasi, D., Mtunzi, F., and Dikio, E. Synthesis of prussian blue and its electrochemical detection of hydro- gen peroxide based on cetyltrimethylammonium bromide (ctab) modified glassy carbonelectrode. *Int. J. Electrochem. Sci*, 8(11):12132–121346, 2013.
- Feng, L., Li, N., Tang, S., Guo, Y., Zheng, J. and Li, X. Photoelectrochemical performance of titanium dioxide/Prussian blue analogue synthesized by impregnation conversion method as photoanode. *Inorganic Chemistry Communications*, 125, p.108349, 2021.
- Fernandez, C. A., Nune, S. K., Motkuri, R. K., Thallapally, P. K., Wang, C., Liu, J., Exarhos, G. J., and McGrail, B. P. Synthesis, characterization, and application of metal organic framework nanostructures. *Langmuir*, 26(24):18591–18594, 2010.
- Fosso-Kankeu, E., Waanders, F., and Geldenhuys, M. Impact of nanoparticles shape and dye property on the photocatalytic degradation activity of tio₂. *International Journal of Science and Research*, 5(11):528–535, 2016.
- Fu, G., Yue, X., and Dai, Z. Glucose biosensor based on covalent immobilization of en- zyme in sol–gel composite film combined with prussian blue/carbon nanotubes hybrid. *Biosensors and Bioelectronics*, 26(9):3973–3976, 2011.
- Gaitán, M., Gonçalves, V. R., Soler-Illia, G. J., Baraldo, L. M., and de Torresi, S. I. C. Structure effects of self-assembled prussian blue confined in highly organized meso- porous tio₂ on the electrocatalytic properties towards h₂o₂ detection. *Biosensors and Bioelectronics*, 26(2):890–893, 2010.
- Gao, L., Zhuang, J., Nie, L., Zhang, J., Zhang, Y., Gu, N., Wang, T., Feng, J., Yang, D., Perrett, S., et al. Intrinsic peroxidase-like activity of ferromagnetic nanoparticles. *Nature*

nanotechnology, 2(9):577–583, 2007.

Gao, Q., Chen, J., Li, Q., Zhang, J., Zhai, Z., Zhang, S., Yu, R., and Xing, X. Structure and excellent visible light catalysis of prussian blue analogues bife (cn) $6 \cdot 4h 2 o$. *Inorganic Chemistry Frontiers*, 5(2):438–445, 2018.

Ghobadi, T.G.U., Ghobadi, A., Demirtas, M., Buyuktemiz, M., Ozvural, K.N., Yildiz, E.A., Erdem, E., Yaglioglu, H.G., Durgun, E., Dede, Y. and Ozbay, E. Building an Iron Chromophore Incorporating Prussian Blue Analogue for Photoelectrochemical Water Oxidation. *Chemistry—A European Journal*, 2021.

Gholivand, M. B. and Azadbakht, A. A novel hydrazine electrochemical sensor based on a zirconium hexacyanoferrate film-bimetallic au–pt inorganic–organic hybrid nanocomposite onto glassy carbon-modified electrode. *Electrochimica acta*, 56(27):10044–10054, 2011.

Glezer, V. and Lev, O. Sol-gel vanadium pentoxide glucose biosensor. *Journal of the American Chemical Society*, 115(6):2533–2534, 1993.

Gong, C., Chen, F., Yang, Q., Luo, K., Yao, F., Wang, S., Wang, X., Wu, J., Li, X., Wang, D. and Zeng, G. Heterogeneous activation of peroxydisulfate by Fe-Co layered double hydroxide for efficient catalytic degradation of Rhodamine B. *Chemical engineering journal*, 321, pp.222-232, 2017.

Gotoh, A., Uchida, H., Ishizaki, M., Satoh, T., Kaga, S., Okamoto, S., Ohta, M., Sakamoto, M., Kawamoto, T., Tanaka, H., et al. Simple synthesis of three primary colour nanoparticle inks of prussian blue and its analogues. *Nanotechnology*, 18(34): 345609, 2007.

Grabner, E. and Kalwellis-Mohn, S. Hexacyanoferrate layers as electrodes for secondary cells. *Journal of applied electrochemistry*, 17(3):653–656, 1987.

Greene, N.D., Bishop, C.R. and Stern, M. Corrosion and electrochemical behavior of chromium-noble metal alloys. *Journal of the Electrochemical Society*, 108(9), p.836, 1961.

Guo, Y., Deng, L., Li, J., Guo, S., Wang, E., and Dong, S. Hemin- graphene hybrid nanosheets with intrinsic peroxidase-like activity for label-free colorimetric detection of single-nucleotide polymorphism. *ACS nano*, 5(2):1282–1290, 2011.

Gurban, A.-M., Noguera, T., Bala, C., and Rotariu, L. Improvement of nadh detection using prussian blue modified screen-printed electrodes and different strategies of immobilisation.

Sensors and Actuators B: Chemical, 128(2):536–544, 2008.

Habtemariam, S., Daglia, M., Sureda, A., Selamoglu, Z., Fuat Gulhan, M. and Mohammad Nabavi, S. Melatonin and respiratory diseases: a review. *Current topics in medicinal chemistry*, 17(4), pp.467-488. Tokoro, H. and Ohkoshi, S.-i. Novel magnetic functionalities of prussian blue analogs, 2017.

Haghighi, B., Hamidi, H., and Gorton, L. Electrochemical behavior and application of prussian blue nanoparticle modified graphite electrode. *Sensors and Actuators B: Chemical*, 147(1):270–276, 2010.

Häkkinen, H., Abbet, S., Sanchez, A., Heiz, U. and Landman, U. Structural, electronic, and impurity-doping effects in nanoscale chemistry: supported gold nanoclusters. *Angewandte Chemie International Edition*, 42(11), pp.1297-1300, 2003.

Harish, S., Joseph, J., and Phani, K. Interaction between gold (iii) chloride and potassium hexacyanoferrate (ii/iii) does it lead to gold analogue of prussian blue? *Electrochimica acta*, 56(16):5717–5721, 2011.

Hartmann, M., Grabner, E., and Bergveld, P. Prussian blue-coated interdigitated array electrodes for possible analytical application. *Analytica chimica acta*, 242:249–257, 1991.

Haruta, M., Yamada, N., Kobayashi, T., and Iijima, S. Gold catalysts prepared by coprecipitation for low-temperature oxidation of hydrogen and of carbon monoxide. *Journal of catalysis*, 115(2):301–309, 1989.

Herren, F., Fischer, P., Ludi, A., and Hälgl, W. Neutron diffraction study of prussian blue, $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3 \cdot x\text{H}_2\text{O}$. location of water molecules and long-range magnetic order. *Inorganic chemistry*, 19(4):956–959, 1980.

Ho, K.C. and Lin, C.L. A novel potassium ion sensing based on Prussian blue thin films. *Sensors and Actuators B: Chemical*, 76(1-3), pp.512-518, 2001.

Hosseinzadeh, R., Sabzi, R. E., and Ghasemlu, K. Effect of cetyltrimethyl ammonium bromide (ctab) in determination of dopamine and ascorbic acid using carbon paste electrode modified with tin hexacyanoferrate. *Colloids and Surfaces B: Biointerfaces*, 68(2):213–217, 2009.

- Hu, M., Furukawa, S., Ohtani, R., Sukegawa, H., Nemoto, Y., Reboul, J., Kitagawa, S., and Yamauchi, Y. Synthesis of prussian blue nanoparticles with a hollow interior by controlled chemical etching. *Angewandte Chemie International Edition*, 51(4):984–988, 2012.
- Huang, J., Fang, X., Liu, X., Lu, S., Li, S., Yang, Z. and Feng, X. High-linearity hydrogen peroxide sensor based on nanoporous gold electrode. *Journal of the Electrochemical Society*, 166(10), p.B814, 2019.
- Hutchings, G. J. and Haruta, M. A golden age of catalysis: A perspective. *Applied Catalysis A: General*, 291(1-2):2–5, 2005.
- Imanishi, N., Morikawa, T., Kondo, J., Takeda, Y., Yamamoto, O., Kinugasa, N., and Yamagishi, T. Lithium intercalation behavior into iron cyanide complex as positive electrode of lithium secondary battery. *Journal of Power Sources*, 79(2):215–219, 1999.
- Itaya, K., Akahoshi, H. and Toshima, S. Electrochemistry of Prussian Blue modified electrodes: an electrochemical preparation method. *Journal of the Electrochemical Society*, 129(7), p.1498, 1982.
- Itaya, K., Ataka, T., and Toshima, S. Spectroelectrochemistry and electrochemical preparation method of prussian blue modified electrodes. *Journal of the American Chemical Society*, 104(18):4767–4772, 1982a.
- Itaya, K., Shibayama, K., Akahoshi, H., and Toshima, S. Prussian-blue-modified electrodes: An application for a stable electrochromic display device. *Journal of Applied Physics*, 53(1):804–805, 1982b.
- Itaya, K., Shoji, N., and Uchida, I. Catalysis of the reduction of molecular oxygen to water at prussian blue modified electrodes. *Journal of the American Chemical Society*, 106(12):3423–3429, 1984.
- Jaffari, S. and Pickup, J. Novel hexacyanoferrate (iii)-modified carbon electrodes: application in miniaturized biosensors with potential for in vivo glucose sensing. *Biosensors and Bioelectronics*, 11(11):1167–1175, 1996.
- Jain, A. K., Singh, R. P., and Bala, C. Solid membranes of copper hexacyanoferrate (iii) as thallium (i) sensitive electrode. *Analytical Letters*, 15(19):1557–1563, 1982.
- Jayalakshmi, M. and Scholz, F. Charge–discharge characteristics of a solid-state prussian blue

- secondary cell. *Journal of power sources*, 87(1-2):212–217, 2000a.
- Jayalakshmi, M. and Scholz, F. Performance characteristics of zinc hexacyanoferrate/prussian blue and copper hexacyanoferrate/prussian blue solid state secondary cells. *Journal of power sources*, 91(2):217–223, 2000b.
- Jeevanandam, J., Barhoum, A., Chan, Y.S., Dufresne, A. and Danquah, M.K. Review on nanoparticles and nanostructured materials: history, sources, toxicity and regulations. *Beilstein journal of nanotechnology*, 9(1), pp.1050-1074, 2018.
- Jia, Z. and Sun, G. Preparation of prussian blue nanoparticles with single precursor. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 302(1-3):326–329, 2007.
- Jia, Z. Synthesis of prussian blue nanocrystals with metal complexes as precursors: Quantitative calculations of species distribution and its effects on particles size. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 389(1-3):144–148, 2011.
- Jiang, H., Chen, Z., Cao, H., and Huang, Y. Peroxidase-like activity of chitosan stabilized silver nanoparticles for visual and colorimetric detection of glucose. *Analyst*, 137(23): 5560–5564, 2012.
- Jiang, Y., Zhang, X., Shan, C., Hua, S., Zhang, Q., Bai, X., Dan, L., and Niu, L. Functionalization of graphene with electrodeposited prussian blue towards amperometric sensing application. *Talanta*, 85(1):76–81, 2011.
- Jin, R., Li, L., Lian, Y., Xu, X., and Zhao, F. Layered double hydroxide supported prussian blue nanocomposites for electrocatalytic reduction of H_2O_2 . *Analytical Methods*, 4(9):2704–2710, 2012.
- Jin, S., Wu, C., Ye, Z. and Ying, Y. Designed inorganic nanomaterials for intrinsic peroxidase mimics: a review. *Sensors and Actuators B: Chemical*, 283, pp.18-34, 2019.
- Johansson, A., Widenkvist, E., Lu, J., Boman, M., and Jansson, U. Fabrication of high-aspect-ratio prussian blue nanotubes using a porous alumina template. *Nano letters*, 5 (8):1603–1606, 2005.
- Josephy, P. D., Eling, T., and Mason, R. P. The horseradish peroxidase-catalyzed oxidation of 3, 5, 3', 5'-tetramethylbenzidine. free radical and charge-transfer complex intermediates. *Journal of Biological Chemistry*, 257(7):3669–3675, 1982.

- Kahlert, H., Komorsky-Lovrić, Š., Hermes, M. and Scholz, F. A Prussian blue-based reactive electrode (reactrode) for the determination of thallium ions. *Fresenius' journal of analytical chemistry*, 356(3), pp.204-208, 1996.
- Kan, E. and Huling, S.G. Effects of temperature and acidic pre-treatment on Fenton-driven oxidation of MTBE-spent granular activated carbon. *Environmental science & technology*, 43(5), pp.1493-1499, 2009.
- Karadas, F., El-Faki, H., Deniz, E., Yavuz, C., Aparicio, S., and Atilhan, M. Co₂ adsorption studies on prussian blue analogues. *Microporous and mesoporous materials*, 162: 91–97, 2012.
- Karyakin, A. A. and Karyakina, E. E. Prussian blue-based artificial peroxidase as a transducer for hydrogen peroxide detection. application to biosensors. *Sensors and Actuators B: Chemical*, 57(1-3):268–273, 1999.
- Karyakin, A. A. Prussian blue and its analogues: electrochemistry and analytical applications. *Electroanalysis: An International Journal Devoted to Fundamental and Practical Aspects of Electroanalysis*, 13(10):813–819, 2001.
- Karyakin, A. A., Gitelmacher, O. V., and Karyakina, E. E. A high-sensitive glucose amperometric biosensor based on prussian blue modified electrodes. *Analytical Letters*, 27(15):2861–2869, 1994.
- Karyakin, A. A., Gitelmacher, O. V., and Karyakina, E. E. Prussian blue-based first-generation biosensor. a sensitive amperometric electrode for glucose. *Analytical chemistry*, 67(14):2419–2423, 1995.
- Karyakin, A. A., Karyakina, E. E., and Gorton, L. Amperometric biosensor for glutamate using prussian blue-based artificial peroxidase as a transducer for hydrogen peroxide. *Analytical chemistry*, 72(7):1720–1723, 2000.
- Karyakin, A. A., Karyakina, E. E., and Gorton, L. On the mechanism of H₂O₂ reduction at prussian blue modified electrodes. *Electrochemistry Communications*, 1(2):78–82, 1999.
- Karyakin, A. A., Karyakina, E. E., and Gorton, L. Prussian-blue-based amperometric biosensors in flow-injection analysis. *Talanta*, 43(9):1597–1606, 1996.
- Karyakin, A. A., Puganova, E. A., Budashov, I. A., Kurochkin, I. N., Karyakina, E. E.,

- Levchenko, V. A., Matveyenko, V. N., and Varfolomeyev, S. D. Prussian blue based nanoelectrode arrays for h₂o₂ detection. *Analytical chemistry*, 76(2):474–478, 2004.
- Karyakin, A.A. Prussian blue and its analogues: electrochemistry and analytical applications. *Electroanalysis: An International Journal Devoted to Fundamental and Practical Aspects of Electroanalysis*, 13(10), pp.813-819, 2001.
- Kasiri, M., Aleboyeh, H., and Aleboyeh, A. Degradation of acid blue 74 using fe-zsm5 zeolite as a heterogeneous photo-fenton catalyst. *Applied Catalysis B: Environmental*, 84(1-2):9–15, 2008.
- Kawamoto, T., Tanaka, H., Kurihara, M., Sakamoto, M., and Yamada, M. Ultrafine particles of prussian blue-type metal complex, dispersion liquid thereof and their production methods, March 16 2010. US Patent 7,678,188.
- Kawamoto, T., Tanaka, H., Kurihara, M., Sakamoto, M., Oomura, A., Watanabe, H., and Goto, A., U.S. Patent 20110268963 A1, November 3, 2011.
- Keggin, J. and Miles, F. Structures and formulae of the prussian blues and related compounds. *Nature*, 137(3466):577–578, 1936.
- Keihan, A.H., Karimi, R.R. and Sajjadi, S. Wide dynamic range and ultrasensitive detection of hydrogen peroxide based on beneficial role of gold nanoparticles on the electrochemical properties of prussian blue. *Journal of Electroanalytical Chemistry*, 862, p.114001, 2020.
- Kelly, K.L., Coronado, E., Zhao, L.L. and Schatz, G.C. The optical properties of metal nanoparticles: the influence of size, shape, and dielectric environment, 2003.
- Kireyko, A.V., Veselova, I.A. and Shekhovtsova, T.N. Mechanisms of peroxidase oxidation of o-dianisidine, 3, 3', 5, 5'-tetramethylbenzidine, and o-phenylenediamine in the presence of sodium dodecyl sulfate. *Russian Journal of Bioorganic Chemistry*, 32(1), pp.71-77, 2006.
- Klamerth, N., Malato, S., Aguera, A., Fernandez-Alba, A., and Mailhot, G. Treatment of municipal wastewater treatment plant effluents with modified photo-fenton as a tertiary treatment for the degradation of micro pollutants and disinfection. *Environmental science & technology*, 46(5):2885–2892, 2012.

- Komkova, M. A., Karyakina, E. E., Marken, F., and Karyakin, A. A. Hydrogen peroxide detection in wet air with a prussian blue based solid salt bridged three electrode system. *Analytical chemistry*, 85(5):2574–2577, 2013.
- Komkova, M.A., Pasquarelli, A., Andreev, E.A., Galushin, A.A. and Karyakin, A.A. Prussian Blue modified boron-doped diamond interfaces for advanced H₂O₂ electrochemical sensors. *Electrochimica Acta*, 339, p.135924, 2020.
- Koncki, R. and Wolfbeis, O. S. Composite films of prussian blue and n-substituted polypyrroles: fabrication and application to optical determination of ph. *Analytical chemistry*, 70(13):2544–2550, 1998a.
- Koncki, R. and Wolfbeis, O. S. Optical chemical sensing based on thin films of prussianblue. *Sensors and Actuators B: Chemical*, 51(1-3):355–358, 1998b.
- Koncki, R. Chemical sensors and biosensors based on prussian blues. *Critical reviews in analytical chemistry*, 32(1):79–96, 2002.
- Koncki, R., Lenarczuk, T., Radomska, A., and Glab, S. Optical biosensors based on prussian blue films. *Analyst*, 126(7):1080–1085, 2001.
- Kora, A.J. and Rastogi, L. Green synthesis of palladium nanoparticles using gum ghatti (*Anogeissus latifolia*) and its application as an antioxidant and catalyst. *Arabian Journal of Chemistry*, 11(7), pp.1097-1106, 2018.
- Koshiyama, T., Tanaka, M., Honjo, M., Fukunaga, Y., Okamura, T. and Ohba, M. Direct synthesis of Prussian blue nanoparticles in liposomes incorporating natural ion channels for Cs⁺ adsorption and particle size control. *Langmuir*, 34(4), pp.1666-1672, 2018.
- Krishnan, V., Xidis, A. L., and Neff, V. Prussian blue solid-state films and membranes as potassium ion-selective electrodes. *Analytica chimica acta*, 239:7–12, 1990.
- Kumar, A. S., Barathi, P., and Pillai, K. C. In situ precipitation of nickel-hexacyanoferrate within multi-walled carbon nanotube modified electrode and its selective hydrazine electrocatalysis in physiological ph. *Journal of electroanalytical chemistry*, 654(1-2): 85–95, 2011.
- Labianca, D. A. A classic case of thallium poisoning and scientific serendipity. *Journal of*

- Chemical Education*, 67(12):1019, 1990.
- Lambert, J. D., Sang, S., and Yang, C. S. Possible controversy over dietary polyphenols: benefits vs risks. *Chemical research in toxicology*, 20(4):583–585, 2007.
- Lenarczuk, T., Glkab, S., and Koncki, R. Application of prussian blue-based optical sensor in pharmaceutical analysis. *Journal of pharmaceutical and biomedical analysis*, 26(1):163–169, 2001a.
- Lenarczuk, T., Wencel, D., Glab, S., and Koncki, R. Prussian blue-based optical glucose biosensor in flow-injection analysis. *Analytica Chimica Acta*, 447(1-2):23–32, 2001b.
- Li, J., Peng, T., and Peng, Y. A cholesterol biosensor based on entrapment of cholesterol oxidase in a silicic sol-gel matrix at a prussian blue modified electrode. *Electroanalysis: An International Journal Devoted to Fundamental and Practical Aspects of Electroanalysis*, 15(12):1031–1037, 2003.
- Li, S.-J., Du, J.-M., Shi, Y.-F., Li, W.-J., and Liu, S.-R. Functionalization of graphene with prussian blue and its application for amperometric sensing of H_2O_2 . *Journal of Solid State Electrochemistry*, 16(6):2235–2241, 2012.
- Li, X., Liu, J., Rykov, A. I., Han, H., Jin, C., Liu, X., and Wang, J. Excellent photo-fenton catalysts of Fe-Co prussian blue analogues and their reaction mechanism study. *Applied Catalysis B: Environmental*, 179:196–205, 2015a.
- Li, X., Wang, J., Rykov, A. I., Sharma, V. K., Wei, H., Jin, C., Liu, X., Li, M., Yu, S., Sun, C., et al. Prussian blue/ TiO_2 nanocomposites as a heterogeneous photo-fenton catalyst for degradation of organic pollutants in water. *Catalysis Science & Technology*, 5(1):504–514, 2015b.
- Liang, Y., Ouyang, J., Wang, H., Wang, W., Chui, P. and Sun, K. Synthesis and characterization of core-shell structured $\text{SiO}_2@ \text{YVO}_4: \text{Yb}^{3+}, \text{Er}^{3+}$ microspheres. *Applied surface science*, 258(8), pp.3689-3694, 2012.
- Lien, C.-W., Huang, C.-C., and Chang, H.-T. Peroxidase-mimic bismuth-gold nanoparticles for determining the activity of thrombin and drug screening. *Chemical Communications*, 48(64):7952–7954, 2012.

- Lin, K.-Y. A., Chen, B.-J., and Chen, C.-K. Evaluating prussian blue analogues $M_3[Fe(CN)_6]$ ($M = Co, Cu, Fe, Mn, Ni$; $M = Co, Fe$) as activators for peroxydisulfate in water. *RSC advances*, 2016.
- Lin, Y., Hu, L., Yin, L. and Guo, L. Electrochemical glucose biosensor with improved performance based on the use of glucose oxidase and Prussian Blue incorporated into a thin film of self-polymerized dopamine. *Sensors and Actuators B: Chemical*, 210, pp.513-518, 2015.
- Liu, Q., Yang, Y., Lv, X., Ding, Y., Zhang, Y., Jing, J. and Xu, C. One-step synthesis of uniform nanoparticles of porphyrin functionalized ceria with promising peroxidase mimetics for H_2O_2 and glucose colorimetric detection. *Sensors and Actuators B: Chemical*, 240, pp.726-734, 2017.
- Liu, S.-Q. and Chen, H.-Y. Spectroscopic and voltammetric studies on a lanthanum hexacyanoferrate modified electrode. *Journal of Electroanalytical Chemistry*, 528(1-2):190–195, 2002.
- Liu, S.-Q., Cheng, S., Feng, L.-R., Wang, X.-M., and Chen, Z.-G. Effect of alkali cations on heterogeneous photo-fenton process mediated by prussian blue colloids. *Journal of hazardous materials*, 182(1-3):665–671, 2010.
- Liu, S.-Q., Cheng, S., Luo, L., Cheng, H.-Y., Wang, S.-J., and Lou, S. *Environmental Chemistry Letters*, 9(1):31–35, 2011.
- Liu, Y., Chu, Z., and Jin, W. A sensitivity-controlled hydrogen peroxide sensor based on self-assembled prussian blue modified electrode. *Electrochemistry Communications*, 11(2):484–487, 2009.
- Lops, C., Ancona, A., Di Cesare, K., Dumontel, B., Garino, N., Canavese, G., Hernández, S., and Cauda, V. Sonophotocatalytic degradation mechanisms of rhodamine b dye via radicals generation by micro- and nano-particles of ZnO. *Applied Catalysis B: Environmental*, 243:629–640, 2019.
- Lu, S.Y., Chen, Y., Fang, X. and Feng, X. Prussian blue modified submicron structured gold electrodes for amperometric hydrogen peroxide sensing. *Electroanalysis*, 30(3), pp.583-592, 2018.

- Ludi, A. and Güdel, H.U. Structural chemistry of polynuclear transition metal cyanides. In *Inorganic chemistry* (pp. 1-21). Springer, Berlin, Heidelberg, 1973.
- Ludi, A. Prussian blue, an inorganic evergreen. *Journal of chemical education*, 58(12): 1013, 1981.
- Ma, H., He, Y., Liu, H., Xu, L., Li, J., Huang, M. and Wei, Y. Anchoring of Prussian blue nanoparticles on polydopamine nanospheres as an efficient peroxidase mimetic for colorimetric sensing. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 577, pp.622-629, 2019.
- Ma, M., Zhang, Y. and Gu, N. Peroxidase-like catalytic activity of cubic Pt nanocrystals. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 373(1-3), pp.6-10, 2011.
- Ma, X., Yin, G., Yang, X. and Wan, J. a Hydrogen Peroxide Sensor Based on Prussian Blue and Dna-Modified Electrode. *Instrumentation science & technology*, 41(5), pp.490-499, 2013.
- Mažeikienė, R., Niaura, G., and Malinauskas, A. Electrocatalytic reduction of hydrogen peroxide at prussian blue modified electrode: An in situ raman spectroelectrochemical study. *Journal of electroanalytical chemistry*, 660(1):140–146, 2011.
- Madden, K.P. and Taniguchi, H. The role of the DMPO-hydrated electron spin adduct in DMPO-OH spin trapping. *Free Radical Biology and Medicine*, 30(12), pp.1374-1380, 2001.
- Mahmoodi, N. M., Arami, M., Limaee, N. Y., and Tabrizi, N. S. Decolorization and aromatic ring degradation kinetics of direct red 80 by uv oxidation in the presence of hydrogen peroxide utilizing tio2 as a photocatalyst. *Chemical Engineering Journal*, 112(1-3):191–196, 2005.
- Mai, N.X.D., Yoon, J., Kim, J.H., Kim, I.T., Son, H.B., Bae, J. and Hur, J. Hybrid hydrogel and aerogel membranes based on chitosan/prussian blue for photo-fenton-based wastewater treatment using sunlight. *Science of Advanced Materials*, 9(9), pp.1484-1487, 2017.
- Majidi, M. R., Asadpour-Zeynali, K., and Hafezi, B. Sensing l-cysteine in urine using a pencil graphite electrode modified with a copper hexacyanoferrate nanostructure. *Microchimica Acta*, 169(3-4):283–288, 2010.

- Matouq, M., Al-Anber, Z., Susumu, N., Tagawa, T., and Karapanagioti, H. The kinetic of dyes degradation resulted from food industry in wastewater using high frequency of ultrasound. *Separation and Purification Technology*, 135:42–47, 2014.
- Mauter, M.S. and Elimelech, M. Environmental applications of carbon-based nanomaterials. *Environmental science & technology*, 42(16), pp.5843-5859, 2008.
- McDermott, D. P. Vibrational assignments and normal-coordinate analyses of gamma-butyrolactone and 2-pyrrolidinones. *The Journal of Physical Chemistry*, 90(12):2569– 2574, 1986.
- Mehrdad, A. and Hashemzadeh, R. Determination of activation energy for the degradation of rhodamine b in the presence of hydrogen peroxide and some metal oxide. *Journal of the Chemical Society of Pakistan*, 31(5):738–743, 2009.
- Mokrushina, A. V., Heim, M., Karyakina, E. E., Kuhn, A., and Karyakin, A. A. Enhanced hydrogen peroxide sensing based on prussian blue modified macroporous micro-electrodes. *Electrochemistry communications*, 29:78–80, 2013.
- Moscone, D., D’ottavi, D., Compagnone, D., Palleschi, G., and Amine, A. Construction and analytical characterization of prussian blue-based carbon paste electrodes and their assembly as oxidase enzyme sensors. *Analytical Chemistry*, 73(11):2529–2535, 2001.
- Mostafa, S., Behafarid, F., Croy, J. R., Ono, L. K., Li, L., Yang, J. C., Frenkel, A. I., and Cuenya, B. R. Shape-dependent catalytic properties of Pt nanoparticles. *Journal of the American Chemical Society*, 132(44):15714–15719, 2010.
- Mullaliu, A. and Giorgetti, M. Metal hexacyanoferrates: ion insertion (or exchange) capabilities. In *Applications of ion exchange materials in the environment* (pp. 109-133). Springer, Cham, 2019.
- Muñoz, E. C., Henríquez, R. G., Córdova, R. A., Schrebler, R. S., Cisternas, R., Balles-teros, L., Marotti, R. E., and Dalchiele, E. A. Photoelectrochemical and optical characterization of prussian blue onto p-si (100). *Journal of Solid State Electrochemistry*, 16(1):165–171, 2012.
- Muthirulan, P. and Velmurugan, R. Direct electrochemistry and electrocatalysis of reduced glutathione on cnfs–pdda/pb nanocomposite film modified ito electrode for biosensors. *Colloids and Surfaces B: Biointerfaces*, 83(2):347–354, 2011.

- Nangia, Y., Kumar, B., Kaushal, J., and Suri, C. R. Palladium@ gold bimetallic nanos- tructures as peroxidase mimic for development of sensitive fluoroimmunoassay. *Analytica chimica acta*, 751:140–145, 2012.
- Narayanan, S. S. and Scholz, F. A comparative study of the electrocatalytic activities of some metal hexacyanoferrates for the oxidation of hydrazine. *Electroanalysis: An International Journal Devoted to Fundamental and Practical Aspects of Electroanalysis*, 11(7):465–469, 1999.
- Nasir, M., Nawaz, M.H., Latif, U., Yaqub, M., Hayat, A. and Rahim, A. An overview on enzyme-mimicking nanomaterials for use in electrochemical and optical assays. *Microchimica Acta*, 184(2), pp.323-342, 2017.
- Neff, V. D. Electrochemical oxidation and reduction of thin films of prussian blue. *Journal of the Electrochemical Society*, 125(6):886, 1978.
- Nguyen, V.T., Le, T.P., Ton, T.P., Nguyen, D.T., Dang, N.N., Nguyen, B.T., Van Van, V., Nguyen, T.H. and Tran, N.Q. Cytocompatible dendrimer G3. 0-hematin nanoparticle with high stability and solubility for mimicking horseradish peroxidase activity in in-situ forming hydrogel. *International Journal of Biological Macromolecules*, 177, pp.360-369, 2021.
- Nguyen-Boisse, T.-T., Saulnier, J., Jaffrezic-Renault, N., and Lagarde, F. Miniaturised enzymatic conductometric biosensor with nafion membrane for the direct determination of formaldehyde in water samples. *Analytical and bioanalytical chemistry*, 406(4):1039–1048, 2014.
- Niu, Q., Bao, C., Cao, X., Liu, C., Wang, H. and Lu, W. Ni–Fe PBA hollow nanocubes as efficient electrode materials for highly sensitive detection of guanine and hydrogen peroxide in human whole saliva. *Biosensors and Bioelectronics*, 141, p.111445, 2019.
- O’Shea, K.E. and Dionysiou, D.D. Advanced oxidation processes for water treatment, 2012.
- Pandey, P. C. and Pandey, A. K. Electrochemical sensing of dopamine and pyrogallol on mixed analogue of prussian blue nanoparticles modified electrodes role of transition metal on the electrocatalysis and peroxidase mimetic activity. *Electrochimica Acta*, 109:536–545, 2013a.

- Pandey, P. and Panday, D. Tetrahydrofuran and hydrogen peroxide mediated conversion of potassium hexacyanoferrate into prussian blue nanoparticles: Application to hydrogen peroxide sensing. *Electrochimica Acta*, 190:758–765, 2016.
- Pandey, P. and Shukla, S. 2-(3, 4-epoxycyclohexyl) ethyltrimethoxysilane intervened synthesis of functional pdnps and heterometallic nanocrystallites; deployed into catalysis. *Advanced Science, Engineering and Medicine*, 8(4):271–283, 2016.
- Pandey, P. C. and Chauhan, D. S. 3-glycidoxypropyltrimethoxysilane mediated in situ synthesis of noble metal nanoparticles: Application to hydrogen peroxide sensing. *Analyst*, 137(2):376–385, 2012.
- Pandey, P. C. and Pandey, A. K. Cyclohexanone and 3-aminopropyltrimethoxysilane mediated controlled synthesis of mixed nickel-iron hexacyanoferrate nanosol for selective sensing of glutathione and hydrogen peroxide. *Analyst*, 138(3):952–959, 2013c.
- Pandey, P. C. and Pandey, A. K. Electrochemical behavior of hydrogen peroxide at nanocomposite of prussian blue with palladium of variable nanogeometry modified electrode. *Journal of The Electrochemical Society*, 159(11):G128, 2012b.
- Pandey, P. C. and Pandey, A. K. Novel synthesis of prussian blue nanoparticles and nanocomposite sol: Electro-analytical application in hydrogen peroxide sensing. *Electrochimica acta*, 87:1–8, 2013b.
- Pandey, P. C. and Pandey, A. K. Surface modification using prussian blue–gold (i)–palladium nanocomposite: towards bioelectrocatalytic probing of hydrogen peroxide. *BioNanoScience*, 2(3):127–134, 2012c.
- Pandey, P. C. and Pandey, A. K. Tetrahydrofuran hydroperoxide mediated synthesis of prussian blue nanoparticles: a study of their electrocatalytic activity and intrinsic peroxidase-like behavior. *Electrochimica Acta*, 125:465–472, 2014.
- Pandey, P. C., Indian Patent 64/DEL/2012, Jan 06, 2012.
- Pandey, P. C., Singh, S., and Sawant, S. N. Functional alkoxy silane mediated controlled synthesis of prussian blue nanoparticles, enabling silica alginate bead development; nanomaterial for selective electrochemical sensing. *Electrochimica Acta*, 287:37–48, 2018a.

- Pandey, P. C., Singh, S., and Walcarius, A. Palladium-prussian blue nanoparticles; as homogeneous and heterogeneous electrocatalysts. *Journal of Electroanalytical Chemistry*, 823:747–754, 2018b.
- Pandey, P., Singh, S., Upadhyay, B., Weetall, H. H., and Chen, P. K. Reversal in the kinetics of the m state decay of d96n bacteriorhodopsin: probing of enzyme catalyzed reactions. *Sensors and Actuators B: Chemical*, 36(1-3):470–474, 1996.
- Pandey, P., Upadhyay, S., and Pathak, H. A new glucose biosensor based on sandwich configuration of organically modified sol-gel glass. *Electroanalysis*, 11(1):59–64, 1999a.
- Pandey, P., Upadhyay, S., and Pathak, H. A new glucose sensor based on encapsulated glucose oxidase within organically modified sol-gel glass. *Sensors and Actuators B: Chemical*, 60(2-3):83–89, 1999b.
- Pandey, P., Upadhyay, S., and Sharma, S. Functionalized ormosils-based biosensor probing a horseradish peroxidase-catalyzed reaction. *Journal of The Electrochemical Society*, 150(4):H85–H92, 2003a.
- Pandey, P., Upadhyay, S., Pathak, H., and Pandey, C. Studies on ferrocene immobilized sol-gel glasses and its application in the construction of a novel solid-state ion sensor. *Electroanalysis: An International Journal Devoted to Fundamental and Practical Aspects of Electroanalysis*, 11(13):950–956, 1999c.
- Pandey, P., Upadhyay, S., Shukla, N., and Sharma, S. Studies on the electrochemical performance of glucose biosensor based on ferrocene encapsulated ormosil and glucose oxidase modified graphite paste electrode. *Biosensors and Bioelectronics*, 18(10):1257–1268, 2003b.
- Pandey, P., Upadhyay, S., Tiwari, I., and Sharma, S. A novel ferrocene-encapsulated palladium-linked ormosil-based electrocatalytic biosensor. the role of the reactive functional group. *Electroanalysis: An International Journal Devoted to Fundamental and Practical Aspects of Electroanalysis*, 13(18):1519–1527, 2001a.
- Pandey, P., Upadhyay, S., Tiwari, I., and Tripathi, V. An ormosil-based peroxide biosensor: a comparative study on direct electron transport from horseradish peroxidase. *Sensors and Actuators B: Chemical*, 72(3):224–232, 2001c.

- Pandey, P., Upadhyay, S., Tiwari, I., Singh, G., and Tripathi, V. A novel ferrocene encapsulated palladium-linked ormosil-based electrocatalytic dopamine biosensor. *Sensors and Actuators B: Chemical*, 75(1-2):48–55, 2001b.
- Pandey, P.C. and Pandey, A.K. Size-dependence enhancement in electrocatalytic activity of NiHCF-gold nanocomposite: potential application in electrochemical sensing. *Analyst*, 137(14), pp.3306-3313, 2012.
- Pandey, P. C., Singh, R., & Pandey, A. K. Tetrahydrofuran hydroperoxide and 3-Aminopropyltrimethoxysilane mediated controlled synthesis of Pd, Pd-Au, Au-Pd nanoparticles: Role of Palladium nanoparticles on the redox electrochemistry of ferrocene monocarboxylic acid. *Electrochimica Acta*, 138, 163-173, (2014)..
- Pandey, P.C. and Pandey, G., Tunable functionality and nanogeometry in tetrahydrofuran hydroperoxide and 3-aminopropyl-trimethoxysilane mediated synthesis of gold nanoparticles; functional application in glutathione sensing. *Journal of Materials Chemistry B*, 2(21), pp.3383-3390, (2014).
- Pandey, P.C., Shukla, S. and Pandey, Y., 2017. Mesoporous silica beads encapsulated with functionalized palladium nanocrystallites: Novel catalyst for selective hydrogen evolution. *Journal of Materials Research*, 32(18), pp.3574-3584.
- Pandey, P.C., Upadhyay, S. and Upadhyay, A.K. Electrochemical sensors based on functionalized ormosil-modified electrodes—role of ruthenium and palladium on the electrocatalysis of nadh and ascorbic acid. *Sensors and Actuators B: Chemical*, 102(1), pp.126-131, 2004.
- Pasnoori, S., Kamatala, C. R., Mukka, S. K., and Kancharla, R. R. Prussian blue as an eco-friendly catalyst for selective nitration of organic compounds under conventional and nonconventional conditions. *Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry*, 44(3):364–370, 2014.
- Piermarini, S., Migliorelli, D., Volpe, G., Massoud, R., Pierantozzi, A., Cortese, C., and Palleschi, G. Uricase biosensor based on a screen-printed electrode modified with prussian blue for detection of uric acid in human blood serum. *Sensors and Actuators B: Chemical*, 179:170–174, 2013.
- Pignatello, J. J., Liu, D., and Huston, P. Evidence for an additional oxidant in the photoassisted fenton reaction. *Environmental Science & Technology*, 33(11):1832–1839, 1999.

- Pignatello, J. J., Oliveros, E., and MacKay, A. Advanced oxidation processes for organic contaminant destruction based on the fenton reaction and related chemistry. *Critical reviews in environmental science and technology*, 36(1):1–84, 2006.
- Ping, J., Wu, J., Fan, K., and Ying, Y. An amperometric sensor based on prussian blue and poly (o-phenylenediamine) modified glassy carbon electrode for the determination of hydrogen peroxide in beverages. *Food chemistry*, 126(4):2005–2009, 2011.
- Pintado, S., Goberna-Ferron, S., Escudero-Adan, E. C., and Galan-Mascaros, J. R. Fast and persistent electrocatalytic water oxidation by co-fe prussian blue coordination poly-mers. *Journal of the American Chemical Society*, 135(36):13270–13273, 2013.
- Pournaghi-Azar, M. and Dastango, H. Electrochemical characteristics of an aluminum electrode modified by a palladium hexacyanoferrate film, synthesized by a simple electroless procedure. *Journal of Electroanalytical Chemistry*, 523(1-2):26–33, 2002.
- Pournaghi-Azar, M.H. and Ahour, F. Palladized aluminum electrode covered by Prussian blue film as an effective transducer for electrocatalytic oxidation and hydrodynamic amperometry n-acetyl-cysteine and glutathione. *Journal of Electroanalytical Chemistry*, 622(1):22–28, 2008.
- Punta, C., Gambarotti, C. and Pignataro, B. N-hydroxy derivatives: key organocatalysts for the selective free radical aerobic oxidation of organic compounds. *Ideas in Chemistry and Molecular Sciences: Advances in Synthetic Chemistry*, 2010.
- Pyrasch, M. and Tieke, B. Electro- and photoresponsive films of prussian blue prepared upon multiple sequential adsorption. *Langmuir*, 17(24):7706–7709, 2001.
- Qian, L., Zheng, R., and Zheng, L. Fabrication of prussian blue nanocubes through reducing a single-source precursor with graphene oxide and their electrocatalytic activity for H_2O_2 . *Journal of nanoparticle research*, 15(7):1806, 2013.
- Qiu, J.-D., Peng, H.-Z., Liang, R.-P., Li, J., and Xia, X.-H. Synthesis, characterization, and immobilization of prussian blue-modified Au nanoparticles: application to electrocatalytic reduction of H_2O_2 . *Langmuir*, 23(4):2133–2137, 2007.
- Qu, L., Yang, S., Li, G., Yang, R., Li, J., and Yu, L. Preparation of yttrium hexacyanoferrate/carbon nanotube/nafion nanocomposite film-modified electrode: application to the

electrocatalytic oxidation of l-cysteine. *Electrochimica acta*, 56(7):2934–2940, 2011.

Qu, R., Zhang, W., Liu, N., Zhang, Q., Liu, Y., Li, X., Wei, Y., and Feng, L. Antioil ag3po4 nanoparticle/polydopamine/al2o3 sandwich structure for complex wastewater treatment: dynamic catalysis under natural light. *ACS Sustainable Chemistry & Engineering*, 6(6):8019–8028, 2018.

Róka, A., Varga, I., and Inzelt, G. Electrodeposition and dissolution of yttrium-hexacyanoferrate layers. *Electrochimica acta*, 51(28):6243–6250, 2006.

Radoi, A., Compagnone, D., Devic, E., and Palleschi, G. Low potential detection of nadh with prussian blue bulk modified screen-printed electrodes and recombinant nadh oxidase from thermus thermophilus. *Sensors and Actuators B: Chemical*, 121(2):501–506, 2007.

Ramirez, J. H., Maldonado-Hódar, F. J., Pérez-Cadenas, A. F., Moreno-Castilla, C., Costa, C. A., and Madeira, L. M. Azo-dye orange ii degradation by heterogeneous fenton-like reaction using carbon-fe catalysts. *Applied Catalysis B: Environmental*, 75 (3-4):312–323, 2007.

Rao, H., Dai, Y., Ge, H., Liu, X., Chen, B., Zou, P., Wang, X., and Wang, Y. Visual and fluorescence detection of pyrogallol based on a ratiometric fluorescence-enzyme system. *New Journal of Chemistry*, 41(14):6630–6637, 2017.

Ravi Shankaran, D. and Sriman Narayanan, S. Amperometric sensor for glutathione based on a mechanically immobilized cobalt hexacyanoferrate modified electrode. *Bulletin of the Chemical Society of Japan*, 75(3):501–505, 2002.

Reeser, D. I., George, C., and Donaldson, D. Photooxidation of halides by chlorophyll at the air-salt water interface. *The Journal of Physical Chemistry A*, 113(30):8591–8595, 2009.

Reguera, E., Marín, E., Calderón, A. and Rodríguez-Hernández, J. Photo-induced charge transfer in Prussian blue analogues as detected by photoacoustic spectroscopy. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 68(1), pp.191-197, 2007.

Rekertaitė, A.I., Valiūnienė, A., Virbickas, P. and Ramanavicius, A. Physicochemical Characteristics of Polypyrrole/(Glucose oxidase)/(Prussian Blue)-based Biosensor Modified with Ni-and Co-Hexacyanoferrates. *Electroanalysis*, 31(1), pp.50-57, 2019.

Ricci, F. and Palleschi, G. Sensor and biosensor preparation, optimisation and applications of

prussian blue modified electrodes. *Biosensors and Bioelectronics*, 21(3):389–407, 2005

Ricci, F., Amine, A., Tuta, C.S., Ciucu, A.A., Lucarelli, F., Palleschi, G. and Moscone, D. Prussian Blue and enzyme bulk-modified screen-printed electrodes for hydrogen peroxide and glucose determination with improved storage and operational stability. *Analytica Chimica Acta*, 485(1), pp.111-120, 2003.

Rice-Evans, C. A., Miller, N. J., and Paganga, G. Structure-antioxidant activity relationships of flavonoids and phenolic acids. *Free radical biology and medicine*, 20(7):933–956, 1996.

Robin, M. B. and Day, P. Mixed valence chemistry-a survey and classification. In *Advances in inorganic chemistry and radiochemistry*, volume 10, pages 247–422. Elsevier, 1968.

Robin, M. B. The color and electronic configurations of prussian blue. *Inorganic Chemistry*, 1(2):337–342, 1962.

Roco, M.C. Nanoparticles and nanotechnology research. *Journal of Nanoparticle Research*, 1(1), p.1, 1999.

Rodriguez, A., Ovejero, G., Sotelo, J., Mestanza, M., and García, J. Heterogeneous fenton catalyst supports screening for mono azo dye degradation in contaminated wastewaters. *Industrial & engineering chemistry research*, 49(2):498–505, 2010.

Rogez, G., Marvilliers, A., Rivière, E., Audière, J.P., Lloret, F., Varret, F., Goujon, A., Mendenez, N., Girerd, J.J. and Mallah, T. A Mixed-Valence Mixed-Spin Prussian-Blue-Like Heptanuclear Complex. *Angewandte Chemie International Edition*, 39(16), pp.2885-2887, 2000.

Rojas, D., Della Pelle, F., Del Carlo, M., d'Angelo, M., Dominguez-Benot, R., Cimini, A., Escarpa, A. and Compagnone, D. Electrodeposited Prussian Blue on carbon black modified disposable electrodes for direct enzyme-free H₂O₂ sensing in a Parkinson's disease in vitro model. *Sensors and Actuators B: Chemical*, 275, pp.402-408, 2018.

Ruiz, E., Rodríguez-Forteza, A., Alvarez, S., and Verdaguer, M. Is it possible to get high tc magnets with prussian blue analogues? a theoretical prospect. *Chemistry—A European Journal*, 11(7):2135–2144, 2005.

S. Entrapment of glucose oxidase in silica gel by the sol-gel method and its application to glucose sensor. *Chemistry letters*, 21(8):1615–1618, 1992.

- Salazar, P., Martín, M., O'Neill, R., Roche, R., and González-Mora, J. Surfactant-promoted prussian blue-modified carbon electrodes: Enhancement of electro-deposition step, stabilization, electrochemical properties and application to lactate microbiosensors for the neurosciences. *Colloids and Surfaces B: Biointerfaces*, 92:180–189, 2012b.
- Salazar, P., Martín, M., O'Neill, R., Roche, R., and González-Mora, J. Improvement and characterization of surfactant-modified prussian blue screen-printed carbon electrodes for selective h₂o₂ detection at low applied potentials. *Journal of Electroanalytical Chemistry*, 674:48–56, 2012a.
- Samain, L., Grandjean, F., Long, G. J., Martinetto, P., Bordet, P., and Strivay, D. Relationship between the synthesis of prussian blue pigments, their color, physical properties, and their behavior in paint layers. *The Journal of Physical Chemistry C*, 117(19):9693–9712, 2013.
- Sangvanich, T., Sukwarotwat, V., Wiacek, R. J., Grudzien, R. M., Fryxell, G. E., Ad-dleman, R. S., Timchalk, C., and Yantasee, W. Selective capture of cesium and thallium from natural waters and simulated wastes with copper ferrocyanide functionalized mesoporous silica. *Journal of hazardous materials*, 182(1-3):225–231, 2010.
- Sattarahmady, N. and Heli, H. An electrocatalytic transducer for l-cysteine detection based on cobalt hexacyanoferrate nanoparticles with a core–shell structure. *Analytical biochemistry*, 409(1):74–80, 2011.
- Sekar, N.C., Shaegh, S.A.M., Ng, S.H., Ge, L. and Tan, S.N. A paper-based amperometric glucose biosensor developed with Prussian Blue-modified screen-printed electrodes. *Sensors and Actuators B: Chemical*, 204, pp.414-420, 2014.
- Shahwan, T., Sirriah, S.A., Nairat, M., Boyacı, E., Eroğlu, A.E., Scott, T.B. and Hallam, K.R. Green synthesis of iron nanoparticles and their application as a Fenton-like catalyst for the degradation of aqueous cationic and anionic dyes. *Chemical Engineering Journal*, 172(1), pp.258-266, 2011.
- Shan, X., Díez-Pérez, I., Wang, L., Wiktor, P., Gu, Y., Zhang, L., Wang, W., Lu, J., Wang, S., Gong, Q., et al. Imaging the electrocatalytic activity of single nanoparticles. *Nature nanotechnology*, 7(10):668–672, 2012.

- Shen, X., Wu, S., Liu, Y., Wang, K., Xu, Z., and Liu, W. Morphology syntheses and properties of well-defined prussian blue nanocrystals by a facile solution approach. *Journal of colloid and interface science*, 329(1):188–195, 2009.
- Sheng, Q., Liu, R. and Zheng, J. Prussian blue nanospheres synthesized in deep eutectic solvents. *Nanoscale*, 4(21), pp.6880-6886, 2012.
- Sheng, Q., Zhang, D., Wu, Q., Zheng, J., and Tang, H. Electrodeposition of prussian blue nanoparticles on polyaniline coated halloysite nanotubes for nonenzymatic hydrogen peroxide sensing. *Analytical Methods*, 7(16):6896–6903, 2015.
- Sheng, Q.-L., Yu, H., and Zheng, J.-B. Solid state electrochemical of the erbium hexacyanoferrate-modified carbon ceramic electrode and its electrocatalytic oxidation of l-cysteine. *Journal of Solid State Electrochemistry*, 12(9):1077–1084, 2008.
- Shokouhimehr, M., Soehnen, E. S., Khitrin, A., Basu, S., and Huang, S. D. Biocompatible prussian blue nanoparticles: Preparation, stability, cytotoxicity, and potential use as an mri contrast agent. *Inorganic Chemistry Communications*, 13(1):58–61, 2010.
- Singh, S. and Pandey, P. Synthesis and application of functional prussian blue nanoparticles for toxic dye degradation. *Journal of Environmental Chemical Engineering*, 8(3):103753, 2020.
- Sitnikova, N. A., Borisova, A. V., Komkova, M. A., and Karyakin, A. A. Superstable advanced hydrogen peroxide transducer based on transition metal hexacyanoferrates. *Analytical chemistry*, 83(6):2359–2363, 2011.
- Sono, M., Roach, M.P., Coulter, E.D. and Dawson, J.H. Heme-containing oxygenases. *Chemical reviews*, 96(7), pp.2841-2888, 1996.
- Stanford, A.L. and Tanner, J.M. *Physics for students of science and engineering*. Academic Press, 2014.
- Stenberg, V. I., Wang, C. T., and Kulevsky, N. Photochemical oxidations. iii. photochemical and thermal behavior of. alpha.-hydroperoxytetrahydrofuran and its implications concerning the mechanism of photooxidation of ethers. *The Journal of Organic Chemistry*, 35(6):1774–1777, 1970.

- Su, L., Xiong, Y., Yang, H., Zhang, P. and Ye, F. Prussian blue nanoparticles encapsulated inside a metal–organic framework via in situ growth as promising peroxidase mimetics for enzyme inhibitor screening. *Journal of Materials Chemistry B*, 4(1), pp.128-134, 2016.
- Sun, H., Shang, Y., Xu, K., Tang, Y., Li, J., and Liu, Z. MnO₂ aerogels for highly efficient oxidative degradation of rhodamine b. *Rsc Advances*, 7(48):30283–30288, 2017.
- Sun, H.-L., Shi, H., Zhao, F., Qi, L., and Gao, S. Shape-dependent magnetic properties of low-dimensional nanoscale prussian blue (pb) analogue $\text{SmFe}(\text{CN})_6 \cdot 4\text{H}_2\text{O}$. *Chemical communications*, (34):4339–4341, 2005.
- Szaciłowski, K., Macyk, W., and Stochel, G. Synthesis, structure and photoelectrochemical properties of the TiO₂–prussian blue nanocomposite. *Journal of Materials Chemistry*, 16(47):4603–4611, 2006.
- Tanaka, K. and Tamamushi, R. Voltammetry in low temperature liquid solutions and frozen media: hexacyanoferrate (ii/iii) redox system in aqueous LiCl solutions at temperatures between 170 K and 300 K. *Journal of electroanalytical chemistry (1992)*, 380
- Tang, Y. and Cheng, W. Key parameters governing metallic nanoparticle electrocatalysis. *Nanoscale*, 7(39), pp.16151-16164, 2015.
- Tani, Y., Eun, H., and Umezawa, Y. A cation selective electrode based on copper (ii) and nickel (ii) hexacyanoferrates: dual response mechanisms, selective uptake or adsorption of analyte cations. *Electrochimica acta*, 43(23):3431–3441, 1998.
- Tao, Y., Lin, Y., Huang, Z., Ren, J., and Qu, X. Incorporating graphene oxide and gold nanoclusters: A synergistic catalyst with surprisingly high peroxidase-like activity over a broad pH range and its application for cancer cell detection. *Advanced materials*, 25(18):2594–2599, 2013.
- Tatsu, Y., Yamashita, K., Yamaguchi, M., Yamamura, S., Yamamoto, H. and Yoshikawa, S. Entrapment of glucose oxidase in silica gel by the sol-gel method and its application to glucose sensor. *Chemistry letters*, 21(8), pp.1615-1618, 1992.
- Tauber, H. Oxidation of pyrogallol to purpurogallin by crystalline catalase. *Journal of Biological Chemistry*, 205(1):395–400, 1953.
- Thanh, N. T., Maclean, N., and Mahiddine, S. Mechanisms of nucleation and growth of nanoparticles

- in solution. *Chemical reviews*, 114(15):7610–7630, 2014.
- Thomsen, K. N. and Baldwin, R. P. Amperometric detection of nonelectroactive cations in flow systems at a cupric hexacyanoferrate electrode. *Analytical Chemistry*, 61(23): 2594–2598, 1989.
- Tokoro, H. and Ohkoshi, S.I. Novel magnetic functionalities of Prussian blue analogs. *Dalton Transactions*, 40(26), pp.6825-6833, 2011.
- Tor, E. R., Francis, T. M., Holstege, D. M., and Galey, F. D. Gc/ms determination of pyrogallol and gallic acid in biological matrices as diagnostic indicators of oak exposure. *Journal of Agricultural and Food Chemistry*, 44(5):1275–1279, 1996.
- Uemura, T. and Kitagawa, S. Prussian blue nanoparticles protected by poly (vinylpyrrolidone). *Journal of the American Chemical Society*, 125(26):7814–7815, 2003.
- Uemura, T., Ohba, M., and Kitagawa, S. Size and surface effects of prussian blue nanoparticles protected by organic polymers. *Inorganic chemistry*, 43(23):7339–7345, 2004.
- Upadhyay, D. and Kolb, D. Optical properties of prussian-blue-modified gold and platinum single-crystal electrodes. *Journal of electroanalytical chemistry (1992)*, 358(1-2):317–325, 1993.
- Upadhyay, D., Gomathi, H., and Rao, G. P. Photoelectrochemical properties of prussian blue-modified glassy carbon. *Journal of electroanalytical chemistry and interfacial electrochemistry*, 301(1-2):199–205, 1991.
- Uyanik, G. and Pekin, B. The deactivation of prussian blue heterogeneous catalyst during the decomposition of H_2O_2 in aqueous alkaline solution. *Journal of Catalysis*, 19(2):195–203, 1970.
- Valiūnienė, A., Virbickas, P., Rekertaitė, A. and Ramanavičius, A. Amperometric glucose biosensor based on titanium electrode modified with Prussian Blue layer and immobilized glucose oxidase. *Journal of The Electrochemical Society*, 164(14), p.B781, 2017.
- Varshney, P., Deepa, M., Agnihotry, S., and Ho, K. Photo-polymerized films of lithium ion conducting solid polymer electrolyte for electrochromic windows (ecws). *Solar energy materials and solar cells*, 79(4):449–458, 2003.
- Vaseashta, A. and Dimova-Malinovska, D. Nanostructured and nanoscale devices, sensors and detectors. *Science and Technology of Advanced Materials*, 6(3-4), pp.312-318, 2005.
- Verdaguer, M. and Girolami, G. S. Magnetic prussian blue analogs. *Magnetism: moleculesto*

- materials V*, 5:283–346, 2005.
- Vidal, J.C., Espuelas, J., Garcia-Ruiz, E. and Castillo, J.R., 2004. Amperometric cholesterol biosensors based on the electropolymerization of pyrrole and the electrocatalytic effect of Prussian-Blue layers helped with self-assembled monolayers. *Talanta*, 64(3), pp.655-664.
- Vipin, A. K., Hu, B., and Fugetsu, B. Prussian blue caged in alginate/calcium beads as adsorbents for removal of cesium ions from contaminated water. *Journal of hazardous materials*, 258:93–101, 2013.
- Vittal, R., Kim, K.-J., Gomathi, H., and Yegnaraman, V. Ctab-promoted prussian blue-modified electrode and its cation transport characteristics for k^+ , na^+ , li^+ , and nh_4^+ ions. *The Journal of Physical Chemistry B*, 112(4):1149–1156, 2008.
- Vollath, D. and KGaA, W.-V. V. G. An introduction to synthesis, properties and application. *and Management*, 7(6):865–870, 2008.
- Wang, C., Chen, S., Xiang, Y., Li, W., Zhong, X., Che, X., and Li, J. Glucose biosensor based on the highly efficient immobilization of glucose oxidase on prussian blue-gold nanocomposite films. *Journal of Molecular Catalysis B: Enzymatic*, 69(1-2):1–7, 2011a.
- Wang, H. and Huang, Y. Prussian-blue-modified iron oxide magnetic nanoparticles as effective peroxidase-like catalysts to degrade methylene blue with H_2O_2 . *Journal of hazardous materials*, 191(1-3), pp.163-169, 2011.
- Wang, L., Nemoto, Y., and Yamauchi, Y. Direct synthesis of spatially-controlled pt- on-pd bimetallic nanodendrites with superior electrocatalytic activity. *Journal of the American Chemical Society*, 133(25):9674–9677, 2011b.
- Wang, N., Ma, W., Du, Y., Ren, Z., Han, B., Zhang, L., Sun, B., Xu, P., and Han, X. Prussian blue microcrystals with morphology evolution as a high-performance photo-fentoncatalyst for degradation of organic pollutants. *ACS applied materials & interfaces*, 11 (1):1174–1184, 2018.
- Wang, Q., Yang, Z., Zhang, X., Xiao, X., Chang, C. K., and Xu, B. A supramolecular- hydrogel-encapsulated hemin as an artificial enzyme to mimic peroxidase. *Angewandte Chemie International Edition*, 46(23):4285–4289, 2007.

- Wang, W., Jiang, X., and Chen, K. Iron phosphate microflowers as peroxidase mimic and superoxide dismutase mimic for biocatalysis and biosensing. *Chemical Communications*, 48(58):7289–7291, 2012.
- Wang, Y. and Chu, W. Degradation of a xanthene dye by Fe(II)-mediated activation of oxone process. *Journal of hazardous materials*, 186(2-3):1455–1461, 2011.
- Wang, Y., Zhu, J., Zhu, R., Zhu, Z., Lai, Z., and Chen, Z. Chitosan/prussian blue-based biosensors. *Measurement Science and Technology*, 14(6):831, 2003.
- Ware, M. Prussian blue: artists' pigment and chemists' sponge, 2008.
- Washko, M. E. and Rice, E. W. Determination of glucose by an improved enzymatic procedure. *Clinical chemistry*, 7(5):542–545, 1961.
- Wessells, C. D. and Huggins, R. A. Stabilization of battery electrodes using prussian blue analogue coatings, September 1 2015. US Patent 9,123,966.
- Wessells, C. D., Huggins, R. A., and Cui, Y. Copper hexacyanoferrate battery electrodes with long cycle life and high power. *Nature communications*, 2(1):1–5, 2011a.
- Wessells, C. D., Peddada, S. V., Huggins, R. A., and Cui, Y. Nickel hexacyanoferrate nanoparticle electrodes for aqueous sodium and potassium ion batteries. *Nano letters*, 11(12):5421–5425, 2011b.
- Wu, P. and Cai, C. The solid state electrochemistry of dysprosium (III) hexacyanoferrate (II). *Electroanalysis: An International Journal Devoted to Fundamental and Practical Aspects of Electroanalysis*, 17(17):1583–1588, 2005.
- Wu, X., Cao, M., Hu, C., and He, X. Sonochemical synthesis of prussian blue nanocubes from a single-source precursor. *Crystal growth & design*, 6(1):26–28, 2006.
- Xu, X.-R., Li, H.-B., Wang, W.-H., and Gu, J.-D. Degradation of dyes in aqueous solutions by the Fenton process. *Chemosphere*, 57(7):595–600, 2004.
- Xue, X., Hanna, K., and Deng, N. Fenton-like oxidation of rhodamine B in the presence of two types of iron (II, III) oxide. *Journal of hazardous materials*, 166(1):407–414, 2009.
- Yamada, M., Ohnishi, N., Watanabe, M., and Hino, Y. Prussian blue nanoparticles protected by the water-soluble π -conjugated polymer PEDOT-S: synthesis and multiple-color pH-sensing with a redox reaction. *Chemical Communications*, (46):7203–7205, 2009.

- Yang, H., Lu, B., Guo, L., and Qi, B. Cerium hexacyanoferrate/ordered mesoporous carbon electrode and its application in electrochemical determination of hydrous hydrazine. *Journal of electroanalytical chemistry*, 650(2):171–175, 2011.
- Yokozawa, T., Chen, C. P., Dong, E., Tanaka, T., Nonaka, G.-I., and Nishioka, I. Study on the inhibitory effect of tannins and flavonoids against the 1, 1-diphenyl-2-picrylhydrazyl radical. *Biochemical pharmacology*, 56(2):213–222, 1998.
- Yu, K., Yang, S., He, H., Sun, C., Gu, C., and Ju, Y. Visible light-driven photocatalytic degradation of rhodamine b over nabo₃: pathways and mechanism. *The Journal of Physical Chemistry A*, 113(37):10024–10032, 2009.
- Zanta, C. L. P., Friedrich, L. C., Machulek Jr, A., Higa, K. M., and Quina, F. H. Surface degradation by a catechol-driven fenton reaction. *Journal of Hazardous Materials*, 178(1-3):258–263, 2010.
- Zeng, J., Wei, W., Liu, X., Wang, Y., and Luo, G. A simple method to fabricate a prussian blue nanoparticles/carbon nanotubes/poly (1, 2-diaminobenzene) based glucose biosensor. *Microchimica Acta*, 160(1-2):261–267, 2008.
- Zeng, Y., Miao, F., Zhao, Z., Zhu, Y., Liu, T., Chen, R., Liu, S., Lv, Z. and Liang, F. Low-cost nanocarbon-based peroxidases from graphite and carbon fibers. *Applied Sciences*, 7(9), p.924, 2017.
- Zhai, J., Zhai, Y., Wang, L., and Dong, S. Rapid synthesis of polyethylenimine-protected prussian blue nanocubes through a thermal process. *Inorganic chemistry*, 47(16):7071–7073, 2008.
- Zhang, L. and Zheng, X. A novel electrogenerated chemiluminescence sensor for pyrogallol with core-shell luminol-doped silica nanoparticles modified electrode by the self-assembled technique. *Analytica chimica acta*, 570(2):207–213, 2006.
- Zhang, N., Wang, G., Gu, A., Feng, Y., and Fang, B. Fabrication of prussian blue/multi-walled carbon nanotubes modified electrode for electrochemical sensing of hydroxylamine. *Microchimica Acta*, 168(1-2):129–134, 2010a.
- Zhang, W., Zhang, Y., Chen, Y., Li, S., Gu, N., Hu, S., Sun, Y., Chen, X., and Li, Q. Prussian blue modified ferritin as peroxidase mimetics and its applications in biological detection. *Journal of nanoscience and nanotechnology*, 13(1):60–67, 2013.

- Zhang, X., An, D., Feng, D., Liang, F., Chen, Z., Liu, W., Yang, Z. and Xian, M. In situ surfactant-free synthesis of ultrathin BiOCl/g-C₃N₄ nanosheets for enhanced visible-light photodegradation of rhodamine B. *Applied Surface Science*, 476, pp.706-715, 2019.
- Zhang, X., Sui, C., Gong, J., Yang, R., Luo, Y., and Qu, L. Preparation, characterization, and property of polyaniline/prussian blue micro-composites in a low-temperature hydrothermal process. *Applied surface science*, 253(22):9030–9034, 2007.
- Zhang, X.-Q., Gong, S.-W., Zhang, Y., Yang, T., Wang, C.-Y., and Gu, N. Prussianblue modified iron oxide magnetic nanoparticles and their high peroxidase-like activity. *Journal of Materials Chemistry*, 20(24):5110–5116, 2010b.
- Zhang, Y., Tian, J., Liu, S., Wang, L., Qin, X., Lu, W., Chang, G., Luo, Y., Asiri, A. M., Al-Youbi, A. O., et al. Novel application of coFe layered double hydroxide nanoplates for colorimetric detection of H₂O₂ and glucose. *Analyst*, 137(6):1325–1328, 2012.
- Zhao, F., Zhang, J., Hou, X., Abe, T., and Kaneko, M. Quenching of photoluminescence from copolymer pendant Ru(bpy)₃²⁺ complexes by colloidal prussian blue. *Journal of the Chemical Society, Faraday Transactions*, 94(2):277–281, 1998.
- Zhao, G., Feng, J.-J., Zhang, Q.-L., Li, S.-P., and Chen, H.-Y. Synthesis and characterization of prussian blue modified magnetite nanoparticles and its application to the electrocatalytic reduction of H₂O₂. *Chemistry of materials*, 17(12):3154–3159, 2005.
- Zhao, Y., Luo, Y., Yang, X., Yang, Y., and Song, Q. Tunable preparation of ruthenium nanoparticles with superior size-dependent catalytic hydrogenation properties. *Journal of hazardous materials*, 332:124–131, 2017.
- Zhao, Z., Ding, J., Zhou, H., Zhu, R. and Pang, H. Concentration as a trigger to improve electrocatalytic activity of a Prussian blue analogue in glucose oxidation. *CrystEngComm*, 21(36), pp.5455-5460, 2019.
- Zhiqiang, G., Xingyao, Z., Guangqing, W., Peibiao, L., and Zaofan, Z. Potassium ion-selective electrode based on a cobalt (ii)-hexacyanoferrate film-modified electrode. *Analytica chimica acta*, 244:39–48, 1991.
- Zhou, D., Wang, C., Luo, J. and Yang, M. C₃N₄ nanosheet-supported Prussian Blue nanoparticles as a peroxidase mimic: colorimetric enzymatic determination of lactate. *Microchimica Acta*, 186(11), pp.1-8, 2019.

- Zhou, D., Zeng, K. and Yang, M. Gold nanoparticle-loaded hollow Prussian blue nanoparticles with peroxidase-like activity for colorimetric determination of L-lactic acid. *Microchimica Acta*, 186(2), pp.1-7, 2019.
- Zhou, M., Zhai, Y., and Dong, S. Electrochemical sensing and biosensing platform based on chemically reduced graphene oxide. *Analytical chemistry*, 81(14):5603–5613, 2009.
- Zhou, T., Zhang, G., Ma, P., Qiu, X., Zhang, H., Yang, H. and Liu, G. Efficient degradation of rhodamine B with magnetically separable Ag₃PO₄@ MgFe₂O₄ composites under visible irradiation. *Journal of Alloys and Compounds*, 735, pp.1277-1290, 2018.
- Zhuang, X., Mao, L., and Li, Y. In situ synthesis of a prussian blue nanoparticles/graphdiyne oxide nanocomposite with high stability and electrocatalytic activity. *Electrochemistry Communications*, 83:96–101, 2017.

List of Publications

1. Prem C. Pandey, **Shwarnima Singh** and Shilpa N. Sawant, "Functional Alkoxysilane Mediated Controlled Synthesis of Prussian Blue Nanoparticles, Enabling Silica Alginate Bead Development; Nanomaterial for Selective Electrochemical Sensing", **Electrochimica Acta**, 287 (2018) 37-48.
2. Prem C. Pandey, **Shwarnima Singh** and Alain Walcarius, "Palladium-Prussian Blue Nanoparticles; as Homogeneous and Heterogeneous Electrocatalysts", **Journal of Electroanalytical Chemistry**, 823 (2018) 747-754.
3. **Shwarnima Singh**, and P. C. Pandey, "Synthesis and Application of Functional Prussian Blue Nanoparticles for Toxic Dye Degradation", **Journal of Environmental Chemical Engineering**, 8 (3) (2020) 103753.
4. Prem C. Pandey, **Shwarnima Singh** and Murli Dhar Mitra, "Synthetic incorporation of palladium-nickel bimetallic nanoparticles within mesoporous silica/silica nanoparticles as efficient and cheaper catalyst for both cationic and anionic dyes degradation", **Journal of Environmental Science and Health, Part A**, 56 (4) (2021) 460-472.