

## DAFTAR PUSTAKA

- Achmad, R. T., Budiawan, and Auerkari, E. I., 2017, Effects of Chromium on Human Body, *Annu. Res. Rev. Biol.*, 13, 1–8.
- Anonim, 2010, Peraturan Menteri Kesehatan No. 492 Tahun 2010 Tentang Persyaratan Kualitas Air Minum
- Ashraf, A., Bibi, I., Niazi, N. K., Ok, Y. S., Murtaza, G., Shahid, M., Kunhikrishnan, A., Li, D., and Mahmood, T., 2017, Chromium(VI) Sorption Efficiency of Acid-Activated Banana Peel Over Organo-Montmorillonite in Aqueous Solutions, *Int. J. Phytoremed.*, 19, 605–613.
- Baig, J. A., Kazi, T. G., Elci, L. Afridi, H. I., Khan, M. I., and Naseer, H. M., 2013, Ultratrace Determination of Cr(VI) and Pb(II) by Microsample Injection System Flame Atomic Spectroscopy in Drinking Water and Treated and Untreated Industrial Effluents, *J. Anal. Methods Chem.*, 2013, 1-8.
- Baker, S. N. and Baker, G. A., 2010, Luminescent Carbon Nanodots: Emergent Nanolights, *Angew. Chemie - Int. Ed.*, 49, 6726–6744.
- Bao, Q., Lin, D., Gao, Y., Wu, L., Fu, J., Galaa, K., Lin, X., and Lin, Q., 2021, Ultrasensitive Off-On-Off Fluorescent Nanosensor for Protamine and Trypsin Detection Based on Inner-Filter Effect between N,S-CDs and Gold Nanoparticles, *Microchem. J.*, 168., 1-9.
- Barman, M. K., Jana, B., Bhattacharyya, S., and Patra, A., 2014, Photophysical Properties of Doped Carbon Dots (N, P, B) and Their Influence on Electron/Hole Transfer in Carbon Dots-Nickel (II) Phtalocyanine Conjugates, *J. Phys. Chem. C*, 118(34), 20034-20041.
- Basaran, B., Ulas, M., Bitlishi, B. O., and Aslan, A., 2008, Distribution of Cr(III) and Cr(VI) in Chrome Tanned Leather, *Indian J. Chem. Technol.*, 15(5), 511-514.
- Bhatt, S., Bhatt, M., Kumar, A., Vyas, G., Gajaria, T., and Paul, P., 2018, Green Route for Synthesis of Multifunctional Fluorescent Carbon Dots from Tulsi Leaves and Its Application as Cr(VI) Sensors, Bio-Imaging and Patterning Agents, *Colloids Surf. B.*, 167. 1-30.
- Bhoyate, S., Mensah-Darkwa, K., and Gupta, R.K., 2017, Recent Development on Nanocomposites of Graphene for Supercapacitor Applications, *Current Grpahene Science*, 1(1), 26-43.
- Biswal, M.R. and Bhatia, S., 2021, Carbon Dot Nanoparticles: Exploring The Potential Use for Gene Delivery in Ophthalmic Diseases, *Nanomater.*, 11(4), 1–12.
- Brasili, E., Bavasso, I., Petruccelli, V., Vilardi, G., Valletta, A., Bosco, C.D., Gentili, A., Pasqua, G., and Di Palma, L., 2020, Remediation of Hexavalent

Chromium Contaminated Water Through Zero-Valent Iron Nanoparticles and Effects on Tomato Plant Growth Performance. *Sci. Rep.*, 10 (1920), 1-11.

Breslin, C. B., Branagan, D., and Garry, L. M., 2018, Electrochemical Detection of Cr(VI) with Carbon Nanotubes Decorated with Gold Nanoparticles, *J. Appl. Electrochem.* 49, 195–205.

Cao, S., Liu, L., Wang, T., Ma, A., Liu, C., Zhuang, X., Ding, H., Mamba, B. B., and Gui, J., 2021, Nitrogen-Doped Carbon Dots as High-Effective Inhibitors for Carbon Steel in Acidic Medium, *Colloids Surf.*, 616, 1-12.

Chatzimitakos, T.G. and Stalikas, C.D., 2020, *Carbon Nanodots From Natural (Re)Sources: A New Perspective on Analytical Chemistry*, Elsevier Inc., Ionnina.

Chen, C., and Wang, H., 2016, *Biomedical Applications and Toxicology of Carbon Nanomaterials*, Wiley-Inc., Verlag.

Chen, S, Liu, M., Yu, Y., and Wang, J., 2019, Room-Temperature Synthesis of Fluorescent Carbon-Based Nanoparticles and Their Application in Multidimensional Sensing, *Sens. Actuators B Chem.*, 288, 749–756.

Choi, Y., Choi, Y., Oh Hoon Kwon, and Byeong Su Kim., 2018, Carbon Dots: Bottom-Up Syntheses, Properties, And Light-Harvesting Applications, *Chem. Asian J.*, 13(6), 586–598.

Crista, D. M. A., El Mragui, A., Algarra, M., Da Silva, J. C. G. E., Luque, R., and Da Silva, L. P., 2020, Turning Spent Coffee Grounds Into Sustainable Precursors for The Fabrication Of Carbon Dots, *Nanomater.*, 10(6), 1–17.

Crista, D. M. A., Da Silva, J. C. G. E. and Da Silva, L. P., 2020, Evaluation of Different Bottom-Up Routes for The Fabrication of Carbon Dots, *Nanomater.*, 10(7), 1–15.

Cui, X., Wang, Y., Liu, J., Yang, Q., Zhang, B., Gao, Y., Wang, Y., and Lu, G., 2017, Dual Functional N- and S-Co-Doped Carbon Dots as the Sensor for Temperature and Fe<sup>3+</sup> Ions, *Sens. Actuators B: Chem.*, 242, 1-24.

Cui, W. and Zhao, X., 2019, *Theranostic Bionanomaterials*, Elsevier, Amsterdam.

Cui, X., Wang, Y., Liu, J., Yang, Q., Zhang, B., Gao, Y., Wang, Y., and Lu, G., 2017, Dual Functional N- and S-Co-Doped Carbon Dots as The Sensor for Temperature and Fe<sup>3+</sup> Ions, *Sens. Actuators B: Chem.*, 242, 1272–1280.

Dang, D. K., Chandrasekaran, S., Ngo, Y. T., Chung, J. S., Kim, E. J., and Hu, S. H., 2018, One Pot Solid-State Synthesis of Highly Fluorescent N and S Co-Doped Carbon Dots and Its Use as Fluorescent Probe for Ag<sup>+</sup> Detection in Aqueous Solution, *Sens. Actuators B: Chem.*, 255, 3284–3291.

Darling, S. B. and Synder, S. W., 2005, *Water Is The Indispensability of Water in Society in Life*, World Scientific Publishing Co. Pte. Ltd., Singapore.

- De, B. and Karak, N., 2013, A Green and Facile Approach for The Synthesis of Water Soluble Fluorescent Carbon Dots from Banana Juice, *RSC Adv.*, 3(22), 8286–8290.
- De Medeiros, T. V., Manioudakis, J., Noun, F., Macairan, J. R., Victoria, F., and Naccache, R., 2019, Microwave-Assisted Synthesis of Carbon Dots and Their Applications, *J. Mater. Chem.*, 7(24), 7175–7195.
- Ding, C., Deng, Z., Chen, J., and Jin, Y., 2020, One-Step Microwave Synthesis of N,S Co-Doped Carbon Dots from 1,6-Hexanediamine Dihydrochloride for Cell Imaging and Ion Detection, *Colloids Surf. B.*, 189, 1–18.
- Ding, H., Wei, J.S. and Xiong, H. M., 2014, Nitrogen and Sulfur Co-Doped Carbon Dots With Strong Blue Luminescence, *Nanoscale*, 6(22), 13817–13823.
- Dong, Y., Pang, H., Yang, H. B., Guo, C., Shao, J., and Chi, Y., 2013, Carbon-Based Dots Co-Doped with Nitrogen and Sulfur for High Quantum Yield and Excitation-Independent Emission, *Angew. Chem. Int. Ed.*, 52, 1–6.
- Dong, C., Wu, G., Wang, Z., Ren, W., Zhang, Y., Shen, Z., Li, T., and Wu, A., 2016, Selective Colorimetric Detection of Cr(III) and Cr(VI) Using Gallic Acid Capped Gold Nanoparticles, *Dalton Trans.*, 45, 8347–8354.
- Du, X. Y., Shen, J., Zhang, J., Ling, L., Wang, C. F., and Chen, S., 2018, Generation of A Carbon Dots/Ammonium Persulfate Redox Initiator Couple for Free Radical Frontal Polymerization, *Polym. Chem.*, 9(4), 420–427.
- Duan, J., Yu, J., Feng, S., and Su, L., 2016, A Rapid Microwave Synthesis of Nitrogen-Sulfur Co-Doped Carbon Nanodots as Highly Sensitive and Selective Fluorescence Probes for Ascorbic Acid, *Talanta*, 153, 332–339.
- Elxsi, T., Dheenadhayalan, P., Nair, A., Manalikandy, M., Reghu, A., John, J., and Rani, V. S., 2018, A Novel Method for Estimation of State of Charge of Lithium-Ion Battery Using Extended Kalman Filter Lithium-Ion Battery Model, *SAE Int.*, 1–7.
- Frois, S. R., Tadeu Grassi, M., de Campos, M. S., and Abate, G., 2012, Determination of Cr(VI) in Water Samples by ICP-OES After Separation of Cr(III) by Montmorillonite, *Anal. Methods*, 4(12), 4389–4394.
- Fu, Z. and Xi, S., 2020, The Effects of Heavy Metals on Human Metabolism, *Toxicol. Mech. Methods.*, 30(3), 167–176.
- Galstyan, V., Id, M. P. B., and Sberveglieri, V., 2018, Metal Oxide Nanostructures in Food Applications : Quality Control and Packaging, *Chemosensors*, 6(16), 1–21.
- Ganguly, S., Das, P., Das, S., Ghorai, U., Bose, M., Ghosh, S., Mondal, M., Das, A. K., Banerjee, S., and Das, N. C., 2019, Microwave Assisted Green Synthesis of Zwitterionic Photoluminescent N-Doped Carbon Dots: An Efficient “On-Off” Chemosensor for Tracer Cr(+6) Considering The Inner

Filter Effect and Nano Drug-Delivery Vector. *Colloids Surf. A Physicochem. Eng. Asp.*, 579, 1-10.

- Gao, N., Yang, W., Nie, H., Gong, Y., Jing, J., Gao, L., and Zhang, X., 2017, Turn-On Theranostic Fluorescent Nanoprobe by Electrostatic Self-Assembly of Carbon Dots with Doxorubicin for Targeted Cancer Cell Imaging, In Vivo Hyaluronidase Analysis, and Targeted Drug Delivery, *Biosens. Bioelectron.*, 96, 300-307.
- Ge, J., Shen, Y., Wang, W., Li, Y., and Yang, Y., 2021, N-Doped Carbon Dots for Highly Sensitive and Selective Sensing of Copper Ion and Sulfide Anion in Lake Water, *J. Environ. Chem. Eng.*, 9(2), 1-8.
- Ghanem, A., Al-Qassar Bani Al-Marjeh, R. and Atassi, Y., 2020, Novel Nitrogen-Doped Carbon Dots Prepared Under Microwave-Irradiation for Highly Sensitive Detection of Mercury Ions, *Heliyon*, 6(4), 1-12.
- Gu, T. Y., Dai, M., Young, D. J., Ren, Z.-G., and Lang, J.-P., 2017, Luminescent Zn(II) Coordination Polymers for Highly Selective Sensing of Cr(III) and Cr(VI) in Water, *Inor. Chem.*, 56(8), 4668–4678.
- Guo, Z., Luo, J., Zhu, Z., Sun, Z., Zhang, X., Wu, Z., Mo, F., and Guan, A., 2020, A Facile Synthesis of High-Efficient N,S Co-Doped Carbon Dots for Temperature Sensing Application, *Dyes Pigm.*, 173, 1-8.
- Han, L., Ghosh, D., Chen, W., Pradhan, S., Chang, X., and Chen, S., 2009, Nanosized Carbon Particles From Natural Gas Soot, *Chem. Mater.*, 21(13), 2803–2809.
- He, G., Shu, M., Yang, Z., Ma, Y., Huang, D., Xu, S., Wang, Y., Hu, N., Zhang, Y., and Xu, L., 2017, Microwave Formation and Photoluminescence Mechanisms of Multi-States Nitrogen Doped Carbon Dots, *Appl. Surf. Sci.*, 422, 257–265.
- He, Z., Huang, H., Jiang, R., Mao, L., Liu, M., Chen, J., Deng, F., Zhou, N., Zhang, X., and Wei, Y., 2020, Click Multiwalled Carbon Nanotubes : A Novel Method for Preparation of Carboxyl Groups Functionalized Carbon Quantum Dots, *Mater. Sci. Eng. C*, 108, 1-7.
- Hou, J., 2020, N,S-Co-Doped Carbon Dots for Rapid Acid Test Paper and Bioimaging, *RSC Adv.*, 10, 41332–41335.
- Hu, A., Rybachuk, M., Lu, Q., and Duley, W.W., 2013, Direct Synthesis of sp-Bonded Carbon Chains on Graphite Surface by Femtosecond Laser Irradiation, *Appl. Phys. Lett.*, 91(13), 1-4.
- Javed, N. and O'Carroll, D. M., 2021, Carbon Dots and Stability of Their Optical Properties, *Part. Part. Syst. Charact.*, 38(4), 1-12.
- Jelinek, R., 2016, *Carbon Quantum Dots: Synthesis, Properties, And Applications*,

Carbon Nanostructures, Beer Sheva.

- Jin, S. H., Kim, D. H., Jun, G. H., Hong, S. H., and Jeon, S., 2013, Tuning The Photoluminescence of Graphene Quantum Dots through The Charge Transfer Effect Of Functional Groups, *ACS Nano*, 7(2), 1239–1245.
- Jones, A.S., Marini, J., Solo-Gabriele, H. M., Robey, N. M., and Townsend, T. G., 2019, Arsenic, Copper, and Chromium From Treated Wood Products in The U.S. Disposal Sector, *Waste Manag.*, 87, 731–740.
- Jorns, M. and Pappas, D., 2021, A Review Of Fluorescent Carbon Dots, Their Synthesis, Physical and Chemical Characteristics, and Applications, *Nanomater.*, 11(6).
- Kang, Z. and Lee, S.T., 2019, Carbon Dots: Advances in Nanocarbon Applications, *Nanoscale*, 11(41), 19214–19224.
- Kantasubrata, J., 2008, Validasi Metode, *Pusat Penelitian LIPI*, Bandung.
- Kaur, H., Kaur, N., and Singh, N., 2020, Nitrogen and Sulfur Co-Doped Fluorescent Carbon Dots for The Trapping of Hg(II) Ions from Water, *Mater. Adv.*, 1(8), 3009–3021.
- Kaur, J., Sharma, S., Mehta, S. K., and Kansal, S. K., 2020, Highly Photoluminescent and pH Sensitive Nitrogen Doped Carbon Dots (NCDs) as A Fluorescent Sensor for The Efficient Detection of Cr(VI) Ions in Aqueous Media, *Spectrochim. Acta A Mol. Biomol. Spectrosc.*, 227, 1-8.
- Kazakis, N., Kantiranis, N., Kalaitzidou, K., Kaprara, E., Mitrakas, M., Frei, R., Vargemezis, G., Tsourlos, P., Zouboulis, A., and Filippidis, A., 2017, Origin of Hexavalent Chromium in Groundwater: The Example of Sarigkiol Basin, Northern Greece, *Sci. Total Environ.*, 593–594, 552–566.
- Krysmann, M. J., Kellarakis, A., Dallas, P., and Giannelis, E. P., 2012, Formation Mechanism of Carbogenic Nanoparticles with Dual Photoluminescence Emission, *J. Am. Chem. Soc.*, 134( 2), 747–750.
- Lai, I. P. J., Harroun, S. G., Chen, S. Y., Unnikrishnan, B., Li, Y. J., and Huang, C. C., 2016, Solid-State Synthesis of Self-Functional Carbon Quantum Dots for Detection of Bacteria and Tumor Cells, *Sens. Actuators B Chem.*, 228, 465–470.
- Li, L., Shao, C., Wu, Q., Wang, Y., and Liu, M., 2018, Green Synthesis Of Multifunctional Carbon Nanodots and Their Applications As A Smart Nanothermometer and Cr(VI) Ions Sensor, *Nano*, 13(12), 1-14.
- Li, H., Kang, Z., Liu, Y., and Lee, S. T., 2012, Carbon Nanodots: Synthesis, Properties, and Applications, *J. Mater. Chem.*, 22(46), 24175-24478.
- Li, L. and Dong, T., 2018, Photoluminescence Tuning In Carbon Dots: Surface Passivation or/and Functionalization, Heteroatom Doping, *J. Mater. Chem. C*, 6(30), 7944–7970.



- Li, Q., Ohulchanskyy, T. Y., Liu, R., Koynov, K., Wu, D., Best, A., Kumar, R., Bonoiu, A., and Prasad, P. N., 2010, Photoluminescent Carbon Dots as Biocompatible Nanoprobes for Targeting Cancer Cells, *J. Phys. Chem. C*, 114(28), 12062–12068.
- Li, X., Zhao, S., Li, B., Yang, K., Lan, M., and Zeng, L., 2021, Advances and Perspectives in Carbon Dot-Based Fluorescent Probes: Mechanism, and Application, *Coord. Chem. Rev.*, 431, 1-22.
- Lim, E. W. C. and Feng, R., 2012, Agglomeration of Magnetic Nanoparticles, *J. Chem. Phys.*, 136, 1-11.
- Lin, F., Bao, Y. and Wu, F., 2019, Carbon Dots for Sensing and Killing Microorganisms, *Journal of Carbon Research*, 5(2), 1-31
- Liu, M., Li, T., Zhang, C., Zheng, Y., Wu, C., Zhang, J., Zhang, K., and Zhang, Z., 2021, Fluorescent Carbon Dots Embedded in Mesoporous Silica Nanospheres: A Simple Platform For Cr(VI) Detection in Environmental Water, *J. Hazard. Mater.*, 415, 1-8.
- Liu, Q., Zhang, N., Shi, H., Ji, W., Guo, X., Yuan, W., and Hu, Q., 2018, One-Step Microwave Synthesis of Carbon Dots for Highly Sensitive and Selective Detection of Copper Ions in Aqueous Solution, *New J Chem.*, 42(4), 3097–3101.
- Liu, X., Li, T., Hou, Y., Wu, Q., Yi, J., and Zhang, G., 2016, Microwave Synthesis of Carbon Dots with Multi-Response Using Denatured Proteins as Carbon Source, *RSC Adv.*, 6(14), 11711–11718.
- Liu, Y., Ma, Y. J., Liu, C. Y., Zhang, Z. Y., Yang, W. D., Nie, S. D., and Zhou, X. H., 2016, The Effective Removal Of Cr(VI) Ions by Carbon Dot-Silica Hybrids Driven by Visible Light, *RSC Adv.*, 6(72), 68530–68537.
- Long, C., Jiang, Z., Shangguan, J., Qing, T., Zhang, P., and Feng, B., 2021, Applications of Carbon Dots in Environmental Pollution Control: A Review, *Chem. Eng. J.*, 406, 1-21.
- Luo, J., Cheng, X., Chen, X., Zhong, C. F., Xie, H., Ye, Y. W., Zhao, H. C., Li, Y., and Chen, H., 2021, The Effect of N And S Ratios in N, S Co-Doped Carbon Dot Inhibitor on Metal Protection in 1 M HCl Solution, *J Taiwan Inst Chem Eng.*, 127, 387–398.
- Luo, P. G., Sahu, S., Yang, S. T., Sonkar, S. K., Wang, J., Wang, H., Lecroy, G. E., Cao, L., and Sun, Y. P., 2013, Carbon “Quantum” Dots For Optical Bioimaging, *J. Mater. Chem. B*, 1(16), 2116–2127.
- Mahato, P., Saha, S., Das, P., Agarwalla, H., and Das, A., 2014, An Overview of The Recent Developments on Hg<sup>2+</sup> Recognition, *RSC Adv.*, 4(68), 36140–36174.
- Meng, X. B., Sheng, J. L., Tang, H. L., Sun, X. J., Dong, H., and Zhang, F. M.,

2018, Metal-Organic Framework as Nanoreactors to Co-Incorporate Carbon Nanodots and CDs Quantum Dots into The Pores for Improved H<sub>2</sub> Evolution Without Noble-Metal Cocatalyst, *Appl. Catal. B Environ.*, 244, 340-346.

Meyerowitz, S., 2001, *Water The Ultimate Cure*, Book Publishing Company, Summertown.

Miao, S., Liang, K., Zhu, J., Yang, B., Zhao, D., and Kong, B., 2020, Hetero-Atom-Doped Carbon Dots: Doping Strategies, Properties and Applications, *Nano Today*, 33, 1-29.

Ming, F., Hou, J., Hou, C., Yang, M., Wang, X., Li, J., Huo, D., and He, Q., 2019, One-Step Synthesized Fluorescent Nitrogen Doped Carbon Dots from Thymidine for Cr (VI) Detection in Water, *Spectrochim. Acta A Mol. Biomol. Spectrosc.*, 222, 1-8.

Mutuyimana, F. P., Liu, J., Nsanzamahoro, S., Na, M., Chen, H., and Chen, X., 2019, Yellow-Emissive Carbon Dots as A Fluorescent Probe for Chromium(VI), *Microchim. Acta*, 186(3), 1-9.

Nandi, S., Ritenberg, M., and Jelinek, R., 2015, Bacterial Detection With Amphiphilic Carbon Dots, *Analyst*, 140(2), 4232–4237.

Papaioannou, N., Titirici, M. M. and Sapelkin, A., 2019, Investigating The Effect of Reaction Time on Carbon Dot Formation, Structure, and Optical Properties, *ACS Omega*, 4(26), 21658–21665.

Pellerin, C., and Booker, S. M., 2000, Reflections on Hexavalent Chromium: Health Hazards of an Industrial Heavyweight. *Environ. Health Perspect.*, 108 (9), A402–A407.

Putri, F. A. R., Mudasir, Morita, K., and Suherman, 2019, Microwave-Assisted Synthesis of Amikacin Modified N,S Co-Doped Carbon Dots for *Escherichia coli* Detection, *Chemosensors*, 7, 1-11.

Ray, S. C., and Jana, N. R., 2017, *Carbon Nanomaterials for Biological and Medical Applications*, Elsevier, Amsterdam.

Riyanto, 2014, *Validasi dan Verifikasi Metode Uji*, Deepublish, Yogyakarta.

Rong, M., Feng, Y., Wang, Y., and Chen, X., 2017, One-Pot Solid Phase Pyrolysis Synthesis of Nitrogen-Doped Carbon Dots for Fe<sup>3+</sup> Sensing and Bioimaging, *Sensors Actuat B Chem.*, 245, 868–874.

Sahiner, N., Suner, S. S., Sahiner, M., and Silan. C., 2019, Nitrogen and Sulfur Doped Carbon Dots from Amino Acids for Potential Biomedical Applications, *J. Fluoresc.*, 29(5), 1191–1200.

Sarkar, S., Das, K., and Das, P. K., 2016, Hydrophobically Tailored Carbon Dots towards Modulating Microstructure Of Reverse Micelle and Amplification of Lipase Catalytic Response, *Langmuir*, 32(16), 3890-3900.

- Sawka, M. N., Cheuvront, S. N., and Carter III, R., 2005, Human Water Needs, *Nutr. Rev.*, 63(6), 31-39.
- Sevilla, M. and Fuertes, A. B., 2009, The Production of Carbon Materials by Hydrothermal Carbonization of Cellulose, *Carbon*, 47, 2281-2289.
- Shan, F., Xia, H., Xie, X., Fu, L., Yang, H., Zhou, Q., Zhang, Y., Wang, Z., and Yu, X., 2021, Novel N-Doped Carbon Dots Prepared Via Citric Acid and Benzoylurea by Green Synthesis for High Selectivity Fe ( III ) Sensing and Imaging in Living Cells, *Microchem. J.*, 167, 1-10.
- Shen, J., Shang, S., Chen, X., Wang, D., and Cai, Y., 2017, Highly Fluorescent N, S-Co-Doped Carbon Dots and Their Potential Applications as Antioxidants and Sensitive Probes for Cr ( VI ) Detection, *Sens. Actuators B Chem.*, 248, 92–100.
- Shen, J., Zhang, T., Cai, Y., Chen, X., Shang, S., and Li, J., 2017, Highly Fluorescent N,S-Co-Doped Carbon Dots: Synthesis and Multiple Applications, *New J. Chem.*, 41(19), 11125–11137.
- Sheng, L., Huangfu, B., Xu, Q., Tian, W., Li, Z., Meng, A., and Tan, S., 2019, A Highly Selective And Sensitive Fluorescent Probe For Detecting Cr ( VI ) and Cell Imaging Based on Nitrogen-Doped Graphene Quantum Dots, *J. Alloys Compd.*, 820, 1-10.
- Song, S., Liang, F., Li, M., Du, F., Dong, W., Gong, X., Shuang, S., and Dong, C., 2019, A Label-Free Nano-Probe for Sequential and Quantitative Determination of Cr(VI) and Ascorbic Acid in Real Samples Based on S and N Dual-Doped Carbon Dots, *Spectrochim. Acta A Mol. Biomol. Spectrosc.*, 215, 58–68.
- Song, Y., Zhu, S., Zhang, S. Fu, Y., Wang, L., Zhao, X., and Yang, B., 2015, Investigation from Chemical Structure to Photoluminescent Mechanism: A Type of Carbon Dots from The Pyrolysis of Citric Acid and An Amine, *J. Mater. Chem. C*, 3(23), 5976–5984.
- Sun, D., Ban, R., Zhang, P. H., Wu, G. H., Zhang, J. R., and Zhu, J. J., 2013, Hair Fiber as A Precursor for Synthesizing of Sulfur- and Nitrogen-Co-Doped Carbon Dots with Tunable Luminescence Properties, *Carbon*, 64, 424–434.
- Sun, X. and Lei, Y., 2017, Fluorescent Carbon Dots and Their Sensing Applications, *Trends Anal. Chem.*, 80, 163-180.
- Sun, Y., Wang, P., Lu, Z., Yang, F., Meziani, M. J., Lecroy, G.E ., Liu, Y., and Qian, H., 2015, Host-Guest Carbon Dots for Enhanced Optical Properties and Beyond, *Sci. Rep.*, 5, 1–6.
- Tabaraki, R. and Sadeghinejad, N., 2018, Ecotoxicology and Environmental Safety Microwave Assisted Synthesis of Doped Carbon Dots and Their Application as Green And Simple Turn Off – On Fluorescent Sensor for Mercury ( II ) and Iodide in Environmental Samples, *Ecotoxicol. Environ. Saf.*, 153, 101–



- Tall, A., Cunha, F. A., Kaboré, B., Barbosa, C. D. D. E. S., Rocha, U., Sales, T. O., Goulart, M. O. F., Tapsoba, I., and Santos, J. C. C. C., 2021, Green Emitting N, P-Doped Carbon Dots as Efficient Fluorescent Nanoprobes for Determination of Cr(VI) in Water and Soil Samples, *Microchem. J.*, 166, 1-12.
- Tetsuka, H., Asahi, R., Nagoya, A., Okamoto, K., Tajima, I., Ohta, R., and Okamoto, A., 2012, Optically Tunable Amino-Functionalized Graphene Quantum Dots, *Adv. Mater.*, 24(39), 5333–5338.
- Travlou, N. A., Secor, J., and Bandosz, T. J., 2017, Highly Luminescent S-Doped Carbon Dots for The Selective Detection of Ammonia, *Carbon*, 114, 544-556.
- Tumolo, M., Ancona, V., De Paola, M., Losacco, D., Campanale, C., Massarelli, C., and Uricchio, V. F., 2020, Chromium Pollution in European Water, Sources, Health Risk, and Remediation Strategies: An Overview, *Int. J. Environ. Res. Public Health*, 17(15), 1-24.
- Vaz, R., Bettini, J., Júnior, J. G. F., Lima, E. D. S., Botero, W. G., Santos, J. C. C and Schiavon, M. A., 2017, High Luminescent Carbon Dots as An Eco-Friendly Fluorescence Sensor for Cr(VI) Determination in Water and Soil Samples, *J. Photochem. Photobiol. A: Chem.*, 346, 502–511.
- Walsh, C. J., 2000, Urban Impacts on The Ecology Of Receiving Waters: A Framework for Assesment, Conservation and Restoration, *Hydrobiologia*, 431, 107–114.
- Wang, B., Song, A., Feng, L., Ruan, H., Li, H., Dong, S., and Hao, J., 2015, Tunable Amphiphilicity and Multifunctional Applications of Ionic-Liquid-Modified Carbon Quantum Dots, *ACS Appl. Mater. Interfaces*, 7(12), 6919–6925.
- Wang, C., Xu, Z., Cheng, H., Lin, H., Humphrey, M. G., and Zhang, C., 2015, A Hydrothermal Route to Water-Stable Luminescent Carbon Dots as Nanosensors for pH and Temperature, *Carbon*, 82, 87–95.
- Wang, J., Wu, Z., Chen, S., Yuan, R., and Dong, L., 2019, A Novel Multifunctional Fluorescent Sensor Based on N/S Co-Doped Carbon Dots for Detecting Cr (VI) and Toluene, *Microchem. J.*, 151, 1-37.
- Wang, F., Wang, L., Xu, J., and Huang, K., 2021, Synthesis and Modification of Carbon Dots for Advanced Biosensing Application, *Analyst*, 146, 4418–4435.
- Wang, J., Wu, Z., Chen, S., Yuan, R., and Dong, L., 2019, A Novel Multifunctional Fluorescent Sensor Based on N/S Co-Doped Carbon Dots for Detecting Cr (VI) and Toluene, *Microchem. J.*, 151, 1-37.
- Xia, C., Zhu, S., Feng, T., Yang, M., and Yang, B., 2019, Evolution and Synthesis

of Carbon Dots: from Carbon Dots to Carbonized Polymer Dots, *Adv. Sci.*, 6(23). 1-23.

Xiao, L. and Sun, H., 2018, Novel Properties and Application of Carbon Dots, *Nanoscale Horiz.*, 3, 565-597

Xu, D., Lei, F., Chen, H., Yin, L., Shi, Y., and Xie, J., 2019, One-Step Hydrothermal Synthesis and Optical Properties of Self-Quenching-Resistant Carbon Dots Towards Fluorescent Ink and as Nanosensors for Fe<sup>3+</sup> Detection, *RSC Adv.*, 9, 8290–8299.

Yan, F., Sun, Z., Zhang, H., Sun, X., Jiang, Y., and Bai, Z., 2019, The Fluorescence Mechanism of Carbon Dots, and Methods for Tuning Their Emission Color : A Review, *Microchim. Acta*, 186(8), 1-37.

Yang, X., Luo, Y., Zhu, S., Feng, Y., Zhuo, Y., and Dou, Y., 2014, One-Pot Synthesis of High Fluorescent Carbon Nanoparticles and Their Applications as Probes for Detection of Tetracyclines, *Biosens Bioelectron*, 56, 6–11.

Zeng, Y. W., Ma, D. K., Wang, W., Chen, J. J., Zhou, L., Zheng, Y. Z., Yu, K., and Huang, S. M., 2015, N, S Co-Doped Carbon Dots with Orange Luminescence Synthesized through Polymerization and Carbonization Reaction of Amino Acids, *Appl. Surf. Sci.*, 342, 136–143.

Zhang, H., Huang, Y., Hu, Z., Tong, C., Zhang, Z., and Hu, S., 2017, Carbon Dots Codoped with Nitrogen and Sulfur Are Viable Fluorescent Probes for Chromium(VI), *Microchim. Acta*, 184(5), 1547–1553.

Zhang, W., 2014, Nanoparticle Aggregation: Principles And Modeling, *Adv. Exp. Med. Biol.*, 811, 20–43.

Zhang, Y., Wang, Y., Feng, X., Zhang, F., Yang, Y., and Liu, X., 2016, Effect of Reaction Temperature on Structure and Fluorescence Properties of Nitrogen-Doped Carbon Dots, *Appl. Surf. Sci.*, 387, 1236–1246.

Zhang, Y., Cui, P., Zhang, F., Feng, X., Wang, Y., Yang, Y., and Liu, X., 2016, Fluorescent Probes For “Off-On” Highly Sensitive Detection of Hg<sup>2+</sup> And L-Cysteine Based On Nitrogen-Doped Carbon Dots’, *Talanta*, 152, 288–300.

Zhao, C., Li, X., Cheng, C., and Yang, Y., 2019, Green and Microwave-Assisted Synthesis of Carbon Dots and Application for Visual Detection of Cobalt ( II ) Ions and pH Sensing, *Microchem. J.*, 147, 183–190.

Zu, F., Yan, F., Bai, Z., Xu, J., Wang, Y., Huang, Y., and Zhou, X., 2017, The Quenching of The Fluorescence of Carbon Dots: A Review On Mechanisms And Applications, *Microchim. Acta*, 184(7), 1899–1914.