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Editorial

Editorial: Functional Nanomaterials for Sensor Applications

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Functional nanomaterials have become one of the most fascinating fields in nanotechnology. The notable interest that they inspire relies on the fact that these nanomaterials constitute the driving force for advanced research in many fields, including nanosized energy conversion, environmental sustainability, catalysts, electronic devices, pervasive sensors, biomedical engineering, and more. This genuine interest is undoubtedly motivated by their unique structure and properties paired with a massive potential for integration in industrial applications.

This Special Issue aims at offering readers a compilation of cutting-edge research regarding the synthesis, development, characterization and utilization of functional nanomaterials, covering a wide spectrum of technologies and applications, serving as a guide for new students of the field as well as established researchers.

This Special Issue is nourished with a variety of topics dealing with carbon-based functional materials [1–4] exploring different transduction mechanisms as well as other emerging technologies with relevance in the biology field [5–9]. Characterization techniques [10] and a comprehensive review on wearable optical sensors under different powering approaches [11] are covered.

The results and findings are expected to be useful for researchers who are working in the field of functional nanomaterials. Finally, the editors would like to express their sincere gratitude to all authors who contributed their innovative research to this Special Issue.

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References

1. Wang, F.; Wang, B.; Zhang, X.; Lu, M.; Zhang, Y.; Sun, C.; Peng, W. High Sensitivity Humidity Detection Based on Functional GO/MWCNTs Hybrid Nano-Materials Coated Titled Fiber Bragg Grating. *Nanomaterials* **2021**, *11*, 1134. [CrossRef] [PubMed]
2. Falco, A.; Romero, F.; Loghin, F.; Lyuleeva, A.; Becherer, M.; Lugli, P.; Morales, D.; Rodriguez, N.; Salmerón, J.; Rivadeneyra, A. Printed and Flexible Microheaters Based on Carbon Nanotubes. *Nanomaterials* **2020**, *10*, 1879. [CrossRef] [PubMed]
3. Rivadeneyra, A.; Salmeron, J.; Murru, F.; Lapresta-Fernández, A.; Rodríguez, N.; Capitan-Vallvey, L.; Morales, D.; Salinas-Castillo, A. Carbon Dots as Sensing Layer for Printed Humidity and Temperature Sensors. *Nanomaterials* **2020**, *10*, 2446. [CrossRef] [PubMed]
4. Sotolongo-García, R.; Rodríguez-Velázquez, E.; Alatorre-Meda, M.; Oropeza-Guzmán, M.; Tirado-Guízar, A.; Pina-Luis, G. Optimizing the Efficiency of a Cytocompatible Carbon-Dots-Based FRET Platform and Its Application as a Riboflavin Sensor in Beverages. *Nanomaterials* **2021**, *11*, 1981. [CrossRef] [PubMed]
5. Terán-Alcocer, Á.; Bravo-Plascencia, F.; Cevallos-Morillo, C.; Palma-Cando, A. Electrochemical Sensors Based on Conducting Polymers for the Aqueous Detection of Biologically Relevant Molecules. *Nanomaterials* **2021**, *11*, 252. [CrossRef] [PubMed]
6. Elgamouz, A.; Nassab, C.; Bihi, A.; Mohamad, S.; Almusafri, A.; Alharthi, S.; Abdulla, S.; Patole, S. Encapsulation Capacity of β-Cyclodextrin Stabilized Silver Nanoparticles towards Creatinine Enhances the Colorimetric Sensing of Hydrogen Peroxide in Urine. *Nanomaterials* **2021**, *11*, 1897. [CrossRef] [PubMed]
7. Li, M.; Yu, Y.; Lu, Y.; Hu, X.; Wang, Y.; Qin, S.; Lu, J.; Yang, J.; Zhang, Z. Optical Microfiber All-Optical Phase Modulator for Fiber Optic Hydrophone. *Nanomaterials* **2021**, *11*, 2215. [CrossRef] [PubMed]
8. Salvador, M.; Marqués-Fernández, J.; Martínez-García, J.; Fiorani, D.; Arosio, P.; Avolio, M.; Brero, F.; Balanean, F.; Guerrini, A.; Sangregorio, C.; et al. Double-Layer Fatty Acid Nanoparticles as a Multiplatform for Diagnostics and Therapy. *Nanomaterials* **2022**, *12*, 205. [CrossRef] [PubMed]
9. Douaki, A.; Demelash Abera, B.; Cantarella, G.; Shkodra, B.; Mushtaq, A.; Ibba, P.; Inam, A.; Petti, L.; Lugli, P. Flexible Screen Printed Aptasensor for Rapid Detection of Furaneol: A Comparison of CNTs and AgNPs Effect on Aptasensor Performance. *Nanomaterials* **2020**, *10*, 1167. [CrossRef] [PubMed]
10. Malepe, L.; Ndungu, P.; Ndinteh, D.; Mamo, M. Nickel Oxide-Carbon Soot-Cellulose Acetate Nanocomposite for the Detection of Mesitylene Vapour: Investigating the Sensing Mechanism Using an LCR Meter Coupled to an FTIR Spectrometer. *Nanomaterials* **2022**, *12*, 727. [CrossRef] [PubMed]
11. Kazanskiy, N.; Butt, M.; Khonina, S. Recent Advances in Wearable Optical Sensor Automation Powered by Battery versus Skin-like Battery-Free Devices for Personal Healthcare—A Review. *Nanomaterials* **2022**, *12*, 334. [CrossRef] [PubMed]