

Nanotechnology Initiatives and Prospects in the Philippines

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The Philippine Council for Industry, Energy, and Emerging Technology Research and Development (PCIEERD) is one of the three sectoral planning councils under the Department of Science and Technology (DOST) in the Philippines. The major Research and Development (R&D) sectors that the Council support included Advanced Materials and Nanotechnology. Initiatives on Nanotechnology R&D have gone a long way since the drafting of the Nanotechnology white paper back in 2009, which was led by representatives from the academe and the government. Through the years, applications of Nanotechnology in the Philippines span through health, food and agriculture, energy, and manufacturing sectors, among others. The Advanced Materials and Nanotechnology Roadmap (2020 – 2028) envisions to provide enabling technologies that have both direct and indirect societal benefits. The overall strategies to see this through included: (1) programs to enhance facilities and services such as the Advanced Device and Materials Testing Center and the Additive Manufacturing Center; (2) Human Resources Development; (3) Research and Development Programs; and (4) Science and Technology Policy Initiatives. Eventually, the Philippines would like to capitalize on nano-enhanced and -enabled materials that may be used for a wide-range of applications that are relevant to address nationwide concerns. Current PCIEERD R&D priorities include materials for energy, smart and functional materials, additive manufacturing, materials informatics, and nano safety. Looking forward, the Philippines, through DOST-PCIEERD, is putting forth effort to strengthen existing and forge new partnerships with various local and foreign stakeholders from the academe, industry, and government through science, technology, and innovation in this field.



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Education

- Master of Science in Food Science, 2019, University of the Philippines Diliman, 1101 Philippines
- Diploma in Research and Development Management, 2010, University of the Philippines – Open University, 1101 Philippines
- Bachelor of Science in Food Science, 2006, University of the Philippines Diliman, 1101 Philippines

Work Experience

- Senior Science Research Specialist, DOST-PCIEERD, 2018 to present.
 - R&D Sectors handled: Advanced Materials, Nanotechnology, Optics and Photonics
- Science Research Specialist II, DOST-PCIEERD, 2013 – 2018
 - R&D Sectors handled: Nanotechnology
- Science Research Specialist I, DOST-PCIEERD, 2011 – 2013
 - R&D Sectors handled: Nanotechnology
- Store Quality Assurance Officer, Goldilocks Bakeshop, Inc, 2007 – 2010
- Trade Analyst, SGS Philippines, ROHQ, 2007
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Publication

Gabriel, A.A., **Vera, D.D.**, Lazo, O.M., Azarcon, V.B., Ocampo, C.G., Marasigan, J.C., & Sandel, G.T. (2017). Ultraviolet-C inactivation of Escherichia coli O157:H7, Listeria monocytogenes, Pseudomonas aeruginosa, and Salmonella enterica in liquid egg white. Food Control, 73, 1303-1309.