

2018 Nanotechnology and Fuel Cell Research Review

<https://marketpublishers.com/r/22903D9D85BEN.html>

Date: February 2019

Pages: 122

Price: US\$ 1,250.00 (Single User License)

ID: 22903D9D85BEN

Abstracts

REPORT SCOPE

In recent years, nanotechnology has gained popularity across the world with advanced and modernized innovations in various applications including composite materials, nanoparticles, fabrication technologies, small machine equipment manufacturing and many others. Essentially, nanotechnology is deeply integrated in various industrial applications, providing advances in process delivery and cost-effective applications in industries such as food and beverage, healthcare and life science, electronics, energy, aerospace, chemical and many others.

Specifically, nanotechnology is being prominently used in fuel cell applications, as the fuel cell manufacturers applying platinum nanoparticles to lower the amount of platinum in cells for cost reduction. With surge in fuel cell electric vehicle production, nanotechnology application in fuel cell is expected to increase further. U.S. Department of Energy, The National Renewable Energy Laboratory (U.S.), and Union of Concerned Scientists (U.S.) are doing research for hydrogen powered fuel cell to make it more efficient, low cost and commercially viable.

Moreover, miniaturization in the electronic industry is leading to the introduction of new semiconductor manufacturing processes. For integrated circuits (ICs), comprising of nanofiber are experiencing great demand in the industry. Nanofiber can withstand high amount of heat generated in electric power modules and exhibits good conductivity.

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