

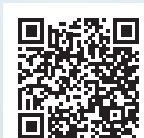
Applied Technology Review

APPLIEDTECHNOLOGYREVIEW.COM
ISSN 2691-4069

NANOTECHNOLOGY
EDITION



AWARDED BY
Applied
Technology
Review



Applied
Technology
Review
TOP 10
NANOTECH
SOLUTIONS PROVIDERS IN APAC - 2023

TOKYO DYLEC

Bringing a New Dawn of Innovation in Nanotechnology

For years, biologists, chemists, and physicists have dedicated their efforts to understanding nanoscale phenomena. Recently, scientific interest in nanoparticles has surged due to their distinct properties and applications. Nanoparticles can detect a broad range of diseases and medical conditions like cancer, heart disease, and diabetes. However, there is still room for improvement despite the advancements in detection techniques, requiring researchers to deploy better tools for accurate measurements.

This is where ground-breaking nanoparticle solutions developed by TOKYO DYLEC, a research and development firm, can offer new opportunities for scientists and researchers.

“Particle properties are complex and include factors like size, concentration, chemical composition, shape, and optical and electrical properties. We have a wide range of measurement technologies and methods to meet these needs,” says Yoshiaki Shirai, president and CEO of TOKYO DYLEC.

The firm’s global partners develop advanced nanoparticle equipment that TOKYO DYLEC uses to create tailored solutions for clients in Japan. It employs various measurement practices like electric mobility, aerodynamic method, and light scattering method to make solutions that can measure from 1 nanometer to tens of micrometers. TOKYO DYLEC also provides classifiers for the collection and analysis of nanoparticles, generating monodisperse and high-concentration particles and quality control equipment for various fields.

TOKYO DYLEC is riding the wave of nanoparticle analysis with its particle measurement solutions that are gaining traction due to their superiority over electron microscope analysis, which traditionally has limited scope.

The firm is also raising the bar in the semiconductor industry, where nanoparticles—called single nano—are extensively researched for their growing importance. To use them at their full potential, these nanoparticles require particle contamination control at the single nanolevel by semiconductor manufacturers and foundries. TOKYO DYLEC can seamlessly fulfill this requirement using nanotech.

TOKYO DYLEC’s single nanoparticle measurement system is used for contamination control in cleaning solutions at major foundries worldwide. The equipment that can generate simulated contamination conditions by generating single nanoparticles is also used to improve the performance of surface inspection equipment.


The development of nanomaterials requires uniformity of the particles and high-precision control, along with particle contamination. TOKYO DYLEC’s measurement solutions perform these critical measurements with high accuracy. It also conducts single nano-sized particle measurement, evaluation of nanoparticles, nanoparticle classification, polydispersity measurement, and aggregation evaluation.

“
Particle properties are complex and include factors such as size, concentration, chemical composition, shape, optical and electrical properties. We have a wide range of measurement technologies and methods to meet these needs
”

Due to these diverse capabilities, TOKYO DYLEC’s solutions are ideal for a wide spectrum of applications. For example, they can be used for carbon dioxide capture and storage (CCS), a technology that separates, captures, and stores CO₂ in the exhaust gas emitted from coal or thermal power plants. At present, the CO₂ separation and recovery process in CCS often uses the chemical absorption method, where CO₂ is separated from the flue gas inside an absorption tower using an amine solvent. This process causes mist formation, which releases a small amount of mist-like amine into the atmosphere. TOKYO DYLEC provides equipment that can be used for gas phase evaluation and real-time monitoring of exhaust gas for particle measurement in the CCS separation and recovery process.

This capability to monitor air quality allowed TOKYO DYLEC to help medical institutions during the pandemic. The firm used its solutions to measure the infection risk index across offices, meeting halls, music halls, and movie theatres.

TOKYO DYLEC has a diverse clientele because of its rich experience and deep expertise. It accredits this success to its versatility, flexibility, mobility, and ability to communicate clearly with clients.

Nanotechnology will keep advancing in the coming years, and TOKYO DYLEC will keep pushing the boundaries of innovation to help its clients succeed in this new era. 



Yoshiaki Shirai,
President & CEO



TOKYO DYLEC



AWARDED BY
**Applied
Technology
Review**

The annual listing of 10 companies in APAC that are at the forefront of providing Nanotechnology solutions and impacting the marketplace

