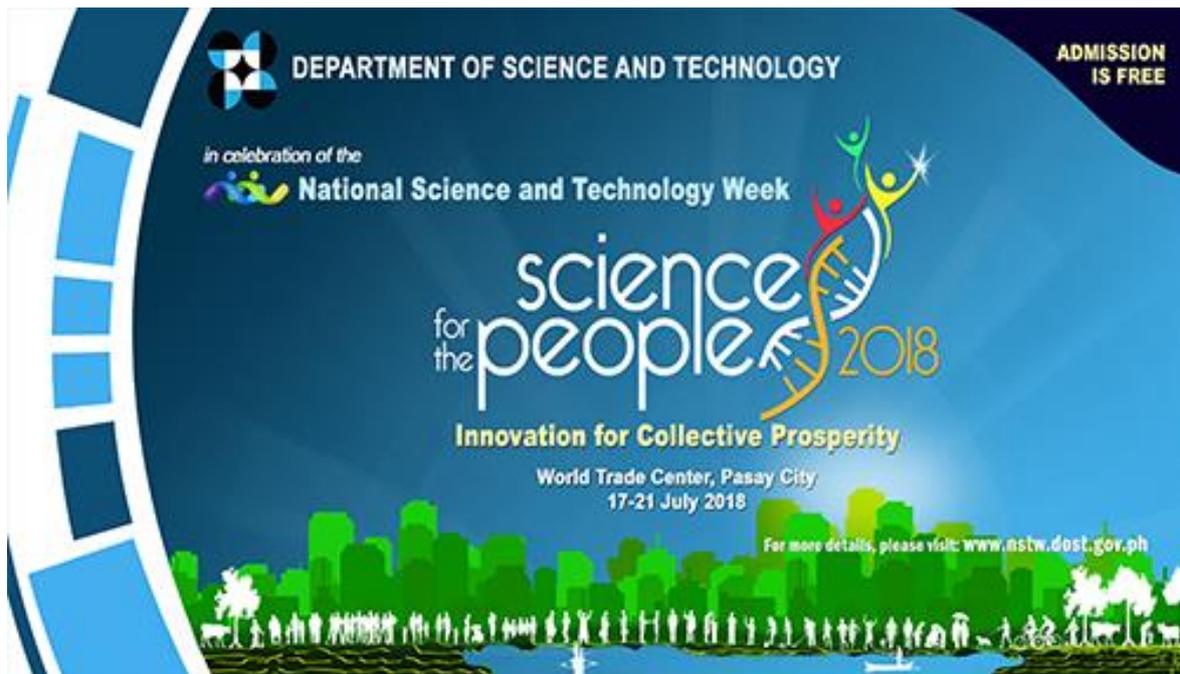




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From farmville to industryville, 2018 ITDI-NSTW innovates for collective prosperity



DOST-ITDI will be joining the science communities of Bicutan, Diliman, Manila, and Los Baños in celebration of the 2018 National Science and Technology Week (NSTW) from July 17-21, 2018 to be held at the Manila World Trade Center in Pasay City.

Carrying the theme, “*Science for the People: Innovation for Collective Prosperity*,” the four science communities have segmented their interactive, clustered exhibits into STI (Science, Technology and Innovations) at Home, STI in School, STI in the Workplace, and STI in the Marketplace. To indicate the type of clustered technologies, and flow of products and services in an ecosystem, STI in the Workplace where ITDI is clustered adopts the ‘farmville to industryville or cityville’ concept.

To be found at the industryville are ITDI’s 12 research outputs, two of which are ideal for use during disasters, and technical services being offered by five of its laboratories/ centers.

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These include five technologies for treatment of industrial wastewater, contaminated water, and other related applications, as follows:

- Sorbent materials from nano zeolites which can remove 99% of heavy metals, like copper, lead, nickel, and zinc, in wastewater allowing reuse or release back of water into the environment;
- Water purification membrane from hollow fiber nanocomposite, which can filter microorganisms and heavy metals but allows the passage of treated water;
- Shrimp shell waste and eggshells composite called 4C Oil Spill Adsorbent for oil spill clean-up;
- High density polyethylene and nano precipitated calcium carbonate for environmental/waste containment; and
- CO₂ capture in diesel-fired boilers using nano zeolite to reduce CO₂ emission in the air by 11 to 14%, 600% more efficient than commercial zeolites.

Technologies for various health-related and disaster relief applications list six. Among these are:

- Improved industrial grade salt production to enable local salt producers to keep up with demand by local industries, and comply with ASIN LAW;
- Nano encapsulated herbal supplement from *malunggay* leaf extract, turmeric, and mature coconut water for the musculoskeletal system;
- Carbon Quantum Dot Sensors (CQDS) in patches for microorganism detection in perishable goods;
- Resistant starch, a food replacer, which can also aid in digestion much like dietary fiber;
- Ready-to-Eat (RTE) disaster relief foods in retort pouches, such as, chicken *arroz caldo*, smoked fish rice meal, packaged *monay*, cassava in light syrup, and boiled sweet potato; and
- Emergency isotonic drink from coconut water, which contains similar concentrations of salt and sugar as in the human body. Available in flexible pouches, it contains no preservatives or chemicals.

A last technology is abaca fiber-reinforced composite for transport applications, which is lightweight, cheap, corrosion-resistant, and environment-friendly. Providing good insulation, it can be used as an alternative to glass fiber for industrial applications.

For technical services being offered by ITDI, five laboratories/ centers will be featured. These include:

- Modular Multi-Industry Innovation Center or Innohub, equipped with modular, multi-function/ application equipment that can be retrofitted to different manufacturing lines;

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- Chemical and Biological Metrology laboratories for use in developing reference and proficiency test materials for chemical and biological measurements related to food safety;
- OneLab, an IT-based referral system, integrating the services of participating laboratories to hasten and broaden public access to testing services of laboratories nationwide in one click;
- Integrated testing services for rubber and rubber-based products for locally manufactured rubber products to meet industry requirements; and
- ADMATEL (Advanced Device and Materials Testing Laboratory), a national testing facility equipped with advanced analytical instruments, providing failure analysis and materials characterization services to the semiconductor and electronics manufacturing industries.

With the main exhibition laid out in Halls A to C of the Manila World Trade Center, fora on the Small Enterprise Technology Upgrading Program (SETUP) and Community Empowerment through Science and Technology (CEST) will be conducted at the mezzanine area of the Center. Admission to the exhibition is free, however, some events may require pre-registration.

NSTW is celebrated every third week of July through Proclamation No. 169 of 1993. It aims to showcase developments in and contributions of science and technology to national development. (AMGuevarra\ ITDI S&T Media Service)

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