

UPDATE FROM THE CUTTING EDGE

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The abstracts of the recent research information appearing in Vol.10 No.10-12 of "AIST TODAY" are introduced here, classified by research areas. For inquiry about the full article, please contact the author via e-mail.

Environment and Energy

Outdoor test facilities for new-type photovoltaic cells and modules

Development of the evaluation technology for outdoor energy performance for various types of photovoltaic cells and modules

The importance of the technologies of energy ratings and evaluation of lifetime of photovoltaic (PV) modules is increasing as the market of PV modules is rising. Outdoor testing facilities have been installed at two locations: at Saga prefecture especially for commercial thin-film PV modules and at Okayama prefecture for highly efficient III-V compounds PV cells in the form of concentrator PV (CPV) modules. At Saga pref., five different types of PV modules (total of 25 kW) have been connected to the grid in AIST Kyushu, and both outdoor and indoor tests with IV tracer have been carried out. At Okayama pref., the CPV system (total of 30 kW) consists of three different PV cells from three nations. The evaluations of power generation characteristics of the CPV systems and concentrating cells under different climate conditions have been carried out at U.S. and Okayama sites.

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Concentrator photovoltaic system at Koyama, Okayama city