# Toyota developing biological fuel cells for non-automobile uses

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TOYOTA Motors is seeking joint development with materials manufacturers to advance its development of biological fuel cells that generate electricity using methanol as feedstock and enzymes as catalyst, as the development of special materials for these fuel cells' electrolytes and electrodes is considered indispensable to a big breakthrough and early practical application.

The company had already substantially upgraded performance by optimizing enzyme and electrode compositions and is now aiming for energy density of 400 Wh/kg, which is equal to or greater than the energy densities of lithium-ion batteries and polymer electrolyte fuel cells.

Instead of vehicles, which require high power output, the automaker is targeting commercialization in application segments in which power requirements are low or that require high energy density for prolonged power generation, since biological fuel cells' ability to generate power is inferior to those of other fuel cells.

*Source : Japan Chemical Web – for internal use only*