

Laboring Humanoid Robot

Humanoid Robotics Group of Intelligent Systems Institute has developed a humanoid robot HRP-2P and a software platform for humanoid robots in the cooperation with Kawada Industries Inc., Yaskawa Electric Corp. Shimiz Corp. and the University of Tokyo. The research and development are supported by Humanoid Robotics Project (HRP for short) of METI. HRP-2P has 150cm height, 58kg weight and 30 degrees of the freedom including two waist joints. The distinguished feature of HRP-2P is its light weight and the removal of a backpack which the conventional humanoid robots have. The software platform, called OpenHRP, is a collection of software for humanoid robots including a dynamics simulator and controllers. HRP-

2P and OpenHRP are expected to be a research platform for humanoid robotics.



Humanoid robot HRP-2P

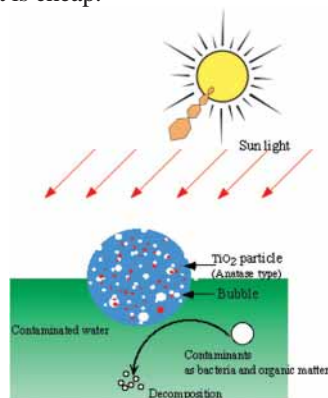
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Synthesis of Floating Spherical Titanium Dioxide Catalyst for Water Purification

We have developed porous glass spherical catalyst containing Anatase type titanium oxide. These catalysts float on a water and decompose contaminants such as ammonia in a water under UV and/or sunshine radiation. Usually, a water treatment is carried out by suspension of powder catalysts in a contaminated water. Many procedures are necessary for purification of contaminated water by powder catalysts. For example, pumping of water, mixing water and catalyst, exposure the mixture of water and catalyst for air, irradiation of UV to the mixture of water and catalyst, and etc. These procedures are not suitable for the purification of large amount of contaminated water such as pond, lake, and river. However, the floating porous glass catalysts contain-

ing titanium oxide, which we had developed, are very useful for water treatment of large amount of contaminated water. Furthermore the floating catalysts need not any maintenance and the production cost is cheap.



Picture of porous glass catalysts floating on the water

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