

28th RAP Seminar

The 28th Seminar on RIKEN Center for Advanced Photonics

Language: Japanese

Date: **Dec.18 (Fri) 16:00 - 17:00, 2015**

Location: **Cooperation Center, 3F, W319, Wako Campus, RIKEN**

(理研 和光キャンパス 研究交流棟3階会議室 W319)

Title: **Water photolysis and photocatalysis**

酸化チタン光触媒の現状と今後の課題

Speaker: **Prof. Akira FUJISHIMA**

(President, Tokyo University of Science)

藤嶋 昭

(東京理科大学 学長)

The tremendous amount of research that has been carried out in the two closely related fields of semiconductor photoelectrochemistry and photocatalysis during the past three decades continues to provide fundamental insights and practical applications. The principles and measurements obtained TiO_2 with photoelectrochemical studies have led to the research activity on heterogeneous photocatalysis, where the strong photooxidative activity of TiO_2 has been applied to environmental cleanup. This resulted in the concept of "light cleaning", i.e., deodorizing, disinfection, and decontamination of air, water and surface with TiO_2 thin films and light. In 1997, we reported the novel photo-induced superhydrophilicity of TiO_2 and proposed the concept of self-cleaning superhydrophilic properties of TiO_2 .

We opened research center in our Noda Campus of Tokyo University of Science, named "Photocatalysis International Research Center" in 2013. In this center, we have three research groups, Artificial photosynthesis group (Demonstration experiment using sun light), Self-cleaning group (Performance evaluation using windows and walls), and Environmental cleanup group (Environmental cleanup with composite photocatalyst). Now we have two more research projects of Diamond PJ and Liquid light-fiber PJ. In this Meeting, I will explain and introduce our recent progress and main targets of this research center.



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