



Biomedical Engineering Seminar Series

2nd Semester, Academic Year 2016

Date: March 22, 2017

Time: 1.00-2.00 PM

**Room 6373, 3rd level, Building 3,
Department of Biomedical Engineering,
Faculty of Engineering;
Mahidol University**



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"Solution Plasma Process and Its Applications in Biomedicine"

Solution plasma process (SPP), a liquid-phase plasma, has been accepted as a capable technology for the purification of water, the synthesis of metal nanoparticles, and the decomposition of organic compounds. Its key factor is the generation of reactive species, induced by the plasma in a liquid environment, which lead to a variety of chemical reactions. Presently, this technology has been broaden to applications in biomedicine. For example, it is used to depolymerize biopolymers such as chitosan and sodium alginate to produce low-molecular weight polymers which possess good biological activities and are beneficial as supplement for patients with several type of symptoms. Colloidal nanoparticles compromised for diagnosis and therapy of diseases could also be synthesized within one-step and without additional chemicals. Apart from the fast rate of reaction, competitive advantage of the SPP in biomedical field is the chemical free which can verify biocompatibility of the required products. This lecture conveys an understanding of the SPP fundamental and example of its applications in biomedicine. Additional information for its utility will also be delivered.

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