

Cancelled

CAMT Seminar

“Multiphase fluid simulation and species transport of atmospheric-pressure plasma jets in contact with liquids”

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Date: 19 March, 2020 (Thu) 15:00-16:00

Location: Main Conference Room (1st floor), Bldg. A12
Center for Atomic and Molecular Technologies (CAMT)
(A12 棟 1 階会議室)

Abstract

Atmospheric-pressure plasmas treating liquids have become popular in recent years, as reactive species produced by the plasma are important for various medical and chemical applications. The typical flow field of a turbulent atmospheric-pressure plasma jet in direct vicinity to a liquid is modelled by solving the Navier-Stokes equations. Turbulence modelling is employed by using a k-epsilon turbulence model. A Volume-of-Fluid (VOF) method is applied for the multiphase modelling of the liquid and gaseous phases. This ensures a self-consistent description of the gas-liquid interface. Transport of chemical species at the gaseous-liquid interface is simulated by solving reaction-diffusion equations for small control volumes. Results are compared to experimental and simulative data from the literature.

(Host: Satoshi Hamaguchi Ext:7913)