特別講演会

第 41 回　流体科学におけるバイオ・医療に関する講演会

主催：　東北大学流体科学研究所
協賛：　日本機械学会東北支部，静電気学会東北支部

日時：令和 5 年 2 月 17 日（金）　15:00 ～ 16:00
場所：オンライン開催（Google Meet）
https://meet.google.com/xnc-vhkr-qjr

講師：Yun-Chien Cheng (Associate Professor, Department of Mechanical Engineering, National Yang Ming Chiao Tung University, Taiwan (Visiting Associate Professor, Institute of Fluid Science, Tohoku University, Japan))

講演タイトル：Atmospheric-pressure Plasma for Medicine: Cancer therapy, RONS generation, deep learning analysis, and circuits

講演内容：In this talk I will share my work about the feasibility of applying plasma for cancer therapy (malignant pleural effusion and skin cancer) and the RONS effect on cells. To better the plasma system for treatment, I also developed circuits to enhance plasma intensity, used deep learning to monitor the plasma current, and investigated RONS effects on protein and mRNA. My work about plasma polymerized coating for biosensor fabrication will also be reported. The aerosol-assisted dielectric-barrier-discharge atmospheric-pressure plasma deposition involves depositing plasma-polymerized ethylene (ppE) with grafted hydroxyl functional groups and embedding the protein in the ppE in one step, making the protein entrapment faster than conventional methods and without using reagents.

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