Special Issue

Dielectric Barrier Discharge Plasma Actuator for Active Flow Control

Message from the Guest Editors

In this Special Issue, we seek papers dealing with the performance evaluation, modeling, and application of conventional and innovative plasma actuators in flow control, including, but not limited to, the following issues:

- Performance improvement of DBD plasma actuators;
- Plasma physics of DBD plasma actuators;
- Detailed performance evaluation of DBD plasma actuators;
- New ideas and devices for efficiently driving DBD plasma actuators, including improvements in materials composing plasma actuators and power supply units;
- DBD plasma actuators applied to control the flow around objects, such as airfoil, wings, and blunt bodies;
- Side effects of actuation of plasma actuators, such as ozone and radio emissions, or degradation of plasma actuator material with continuous use.

Guest Editors

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Deadline for manuscript submissions

closed (28 February 2023)

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About the Journal

Message from the Editorial Board

We are just entering the Next Wave of Technology (NWT) where actuators will play the same role as the computer chip did for computers/social media approximately four decades ago. Just in the U.S., production of $1 trillion year of electromechanical systems (vehicles, orthotics, manufacturing cells, freight trains, aircraft, etc.) will be impacted by the NWT, all driven by actuators. Five key trends can be found for the future perspectives: “Performance to Reliability”, “Hard to Soft”, “Macro to Nano”, “Homo to Hetero” and “Single to Multi functional”. We invite papers that primarily impact these economic sectors; those illustrating basic scientific principles are also welcome.

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