

# Physics of Radiofrequency Capacitive Discharge

For decades, researchers have been paying much attention to radiofrequency capacitive discharge (RFCD). Recent practical applications include plasma technologies for surface modification (etching, deposition of thin films), nanotechnology, gas lasers, plasma chemistry, plasma displays, exhaust gas purification systems for internal combustion engines, switches of powerful power-electric systems, and ionic motors for space research. Research continues at a rapid pace and the next wave of innovations awaits us.

This book describes the physical mechanism of RFCD of low and medium pressure and the properties of discharge plasma in detail. Largely based on the author's experimental research, particular attention is paid to the observed physical phenomenon of the appearance of high-energy near-electrode electron beams in the RFCD. This book examines the main properties and characteristics of RFCD, the properties of near-electrode layers of a spatial charge, the nature of the electric field in them, and the processes of charge transport to electrodes.

*Physics of Radiofrequency Capacitive Discharge* is a valuable reference for scientists engaged in gas discharge physics and low-temperature plasmas, as well as graduate students and students of physics, physical chemistry, and relevant specialties.

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