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### **When Low Temperature Plasmas Meet Surfaces**

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Low temperature plasmas are virtually always bounded by surfaces. Charged particles from the plasma recombine and are emitted at walls; plasma species exchange mass, momentum and energy with walls; the plasma electrostatic potential is referenced to wall potential; energetic and often chemically reactive charged and neutral species from the plasma impact surfaces and reflect, embed, diffuse and desorb back to the plasma; dust particle nuclei may be created at surfaces and ejected into the plasma; and surface erosion and re-deposition often dramatically alter plasma neutral composition and temperature. In this talk, I will present an overview of plasma-surface interactions with an emphasis on elements of what the gaseous electronics community has learned during the last several decades, and including some thoughts on new directions and opportunities.