

Abstract. In the present work, the effect that strong metallic getters has in the carbon removal rate by He/O₂ glow discharges is addressed. Due to the stringent conditions required for the use of Be in laboratory experiments, Li and Mg have been tested as O getters, the former showing also high H-getter properties. Samples of C/Metal mixtures are produced by introducing the metallic evaporator into the glow discharge deposition chamber, which is kept at room temperature. Two schemes were used: layered deposition and full mix-up. Hydrogen methane mixtures are used as precursors of hard a-C: H films in a DC glow discharge apparatus. The film growth and removal rate was monitored *in situ* through laser interferometry and particle balance from the mass spectrometer data. Surface analysis techniques have been applied for the mixed film characterization prior and after the exposure to the oxidizing plasma. Removal rates up to 12 nm/min are obtained in the absence of metals. It was found that full removal of carbon from the metal/C layers was possible for the plasma conditions used. Rates of similar value to those of pure C films were achieved except for the case of layered deposition, where a decrease in the film etching rate was observed corresponding to the location of the metal layer.