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### **Chaotic behavior of plasma surface interaction. A table of plasma treatment parameters useful to the restoration of metallic archaeological objects**

C. L. Xaplanteris <sup>(1,2)</sup> and E. Filippaki <sup>(2)</sup>

(1) Hellenic Military Academy, Vari Attika, (2) Plasma Physics Lab, IMS, NCSR "Demokritos", Athens, Greece

[lfilip@ims.demokritos.gr](mailto:lfilip@ims.demokritos.gr)

In Plasma Physics laboratory of NCSR "Demokritos" the plasma chemistry method has been used for the restoration and conservation of metallic archaeological objects during the last decades. The obtained experience had led us to conclude that plasma parameters and different status of treated objects are so specific, so as to become unique. In the present paper the theoretical and experimental results of our laboratory are summarized. A treatment table of plasma parameters is given, which claims to be useful for the conservators. It is obvious that this treatment table needs to be completed and extended, so that it meets the uniqueness of each artifact. A theoretical study and the treatment of a variety of iron objects are presented.

Keywords: plasma sheath potential, plasma restoration, corrosion, external potential, plasma parameters