Radio Frequency Plasma Modification of Nanomaterials for Potential Applications

Aysegul UYGUN OKSUZ
Suleyman Demirel University, Faculty of Arts and Science, Department of Chemistry, Isparta/TURKEY
ayseguluygun@sdu.edu.tr

Abstract (Calibri 12)

Radio Frequency Plasma Modification of nanomaterials have grown considerably for their enhanced use such as electrochromic, photovoltaic and biomedical fields in number over the past decade [1-2]. RF plasma reactors are known for their multitude of possible configurations, whether home-built or using a commercially available setup to modify a wide range of materials. Moreover, RF plasma modification can be performed in a high-throughput manner, and is highly customizable in terms of easily adjusting key plasma parameters, such as applied power, time and etc. We present here an overview of possible outcomes of plasma modification, such as enhanced properties and deposition of a thin film of nanomaterials for different applications such as electrochromic, photovoltaic and biomedical fields [3-4].

References

[1] G C Cogal, G Y Karaca, E Uygun, F Kuralay, L Oksuz, M Remskar, A Uygun Oksuz, Analytica Chimica Acta 1138 (2020) 69-78.
[2] G Y Karaca, G Celik Cogal, E Eren, L Oksuz, A Uygun Oksuz, Emergent Materials 3 (5) (2020) 613-624.
[3] S Cogal, SE Ela, GC Cogal, M Micusik, M Omastova, A Uygun Oksuz, Polymer Composites 39 (3) (2018) 668-674.
[4] E Eren, C Alver, GY Karaca, E Uygun, AU Oksuz, Synthetic Metals 235 (2018) 115-124.

Figure 1: RF-Rotating Plasma System