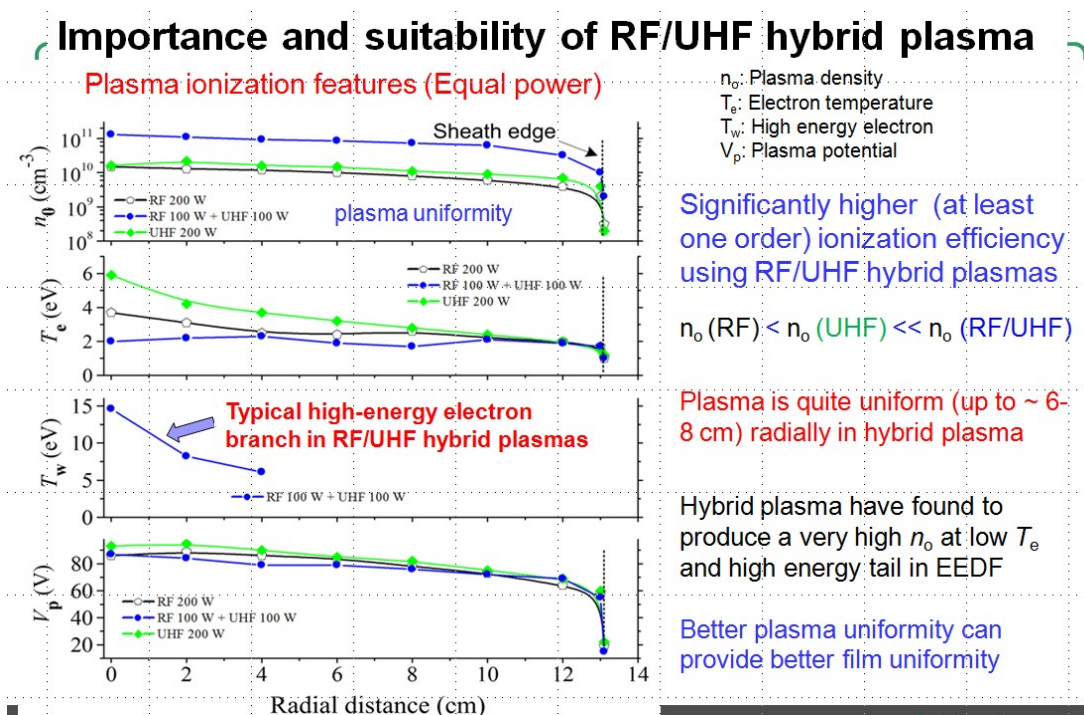


Supplementary information

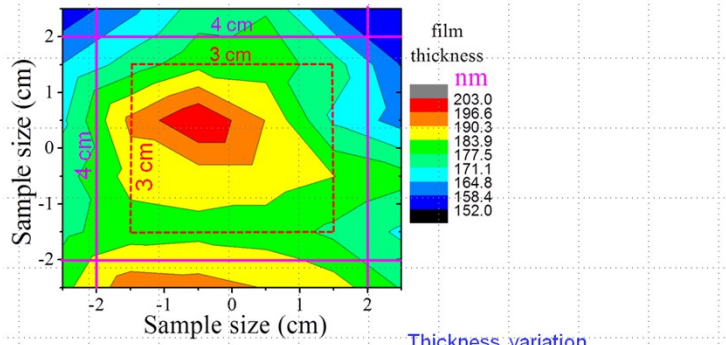
Highlights

- RF/UHF dual frequency capacitively coupled plasma has shown very high ionization efficiency
- Addition of UHF power enhances molecular dissociation and enables formation of high density atomic nitrogen radicals in the plasmas
- Suitability of dual frequency plasmas for PECVD applications
- Plasma and radical control are key to tailor the film property



Film uniformity check in a 5 cm x 5 cm Sample

Better plasma uniformity can provide better film uniformity



3 cm x 3 cm Sample is quite suitable

Thickness variation

Up to 4 cm x 4 cm = 200 nm ± 20 nm

Up to 3 cm x 3 cm = 200 nm ± 10 nm