

Study of the evolution of pulsed plasma under an external longitudinal magnetic field

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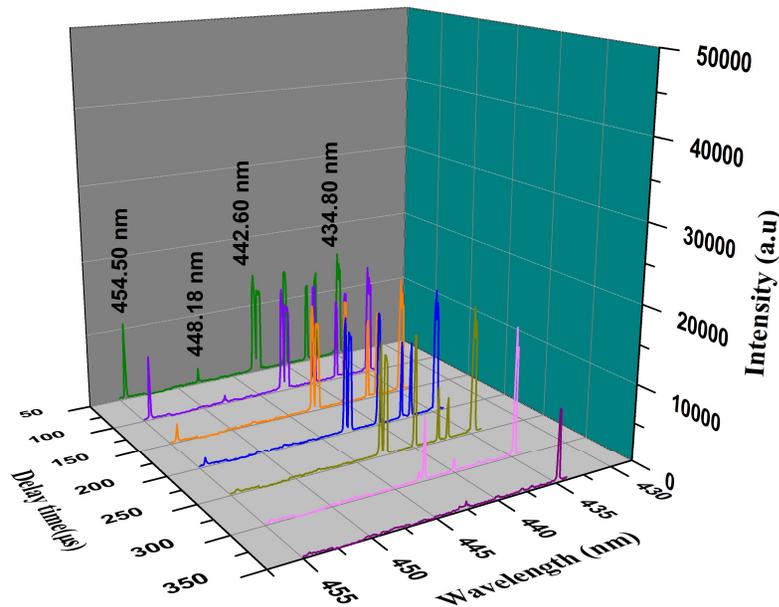


Figure Caption: Transitions of argon species to different states of metastable and non-metastable energy levels at $B = 0.1$ T

The evolution of plasma stream is studied during different time frames of its lifetime in the presence of an external magnetic field. The evolution of plasma density, electron temperature and excitation temperature profile gives insights about the recombination and diffusion phase of the plasma species and also the transition from one phase to another during the period of plasma lifetime. Time resolved imaging shows that the plasma stream forms outside the electrode assembly which has a steady flow and then decays gradually.

Source: Journal of Applied Physics, Vol. 134, 023301, July, 2023

Published Paper Link: <https://doi.org/10.1063/5.0138988>