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On the Structural, Morphological and Electrical Properties of Tantalum Oxy Nitride Thin Films by Varying Oxygen Percentage in Reactive Gases Plasma

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Highlights

- Multiphase tantalum oxy nitride film fabrication was achieved with a reactive gases plasma.
- The oxygen percentage in the gas admixture is varied and the influences are studied.
- A crystalline to amorphous transformation was observed for higher oxygen percentages.
- We observed grain escalation with an increase in the oxygen percentage.
- The electrical resistivity of the films was successfully tuned through oxygen variation.

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