

Fig.1. Schematics of 6-step ALD in this study. The additional reactant (NH_3) was consecutively provided followed by the main counter reactant for ALD-Ru, O_2 .

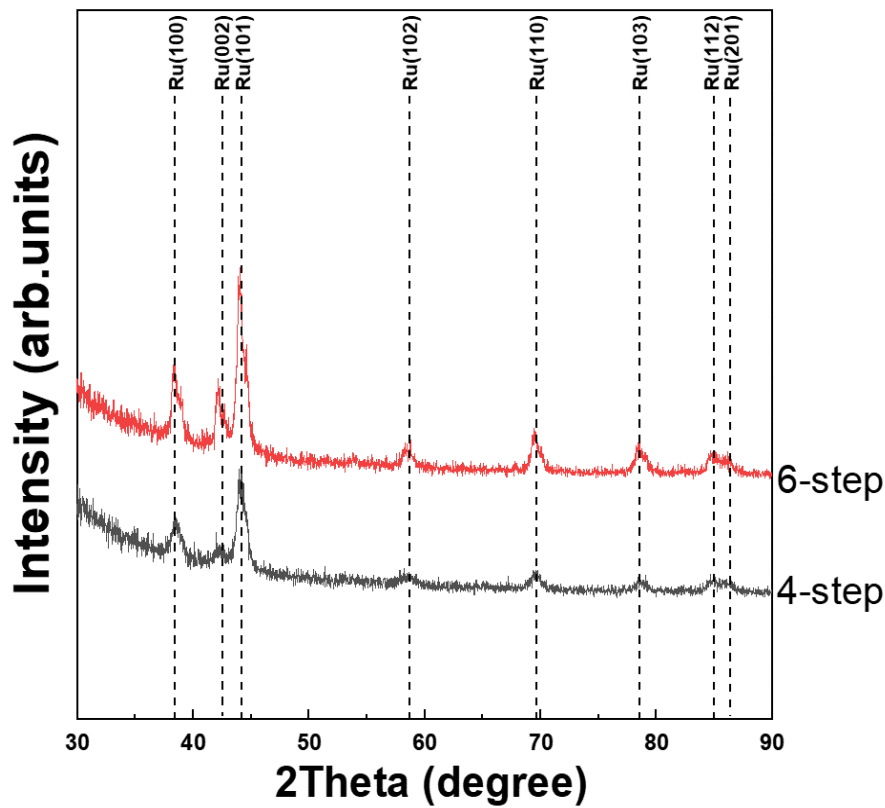


Fig.2 X-ray diffraction (XRD) patterns of Ru thin films with 4-step and 6-step ALD.

References

- [1] Dutta, S. et al., "Highly Scaled Ruthenium Interconnects", IEEE Electron Device Lett. 2017, 38, 949.
- [2] Kotsugi, Yohei et al., "Atomic Layer Deposition of Ru for Replacing Cu-Interconnects", Chem. Mater. 2021, 33, 5639–5651.

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