

- [1] R. D. Peacock, *The Intensities of Lanthanide $f \leftrightarrow f$ Transitions*, in: *Structure and Bonding – Vol. 22*, Springer, Berlin, **1975**.
- [2] J. C. G. Bünzli, *Coord. Chem. Rev.* **2015**, 293-294.
- [3] T. Busani, R. Devine, P. Gonon, *ECS Trans.* **2006**, 1, 5.
- [4] J. Päiväsäari, M. Putkonen, L. Niinistö, *Thin Solid Films* **2005**, 472, 1-2.
- [5] T. Hatanpää, M. Ritala, M. Leskelä, *Coord. Chem. Rev.* **2013**, 257, 23-24.
- [6] S. Cwik, S. M. J. Beer, M. Schmidt, N. C. Gerhardt, T. de los Arcos, D. Rogalla, J. Weßling, I. Giner, M. R. Hofmann, G. Grundmeier, A. D. Wieck, A. Devi, *Dalton Trans.* **2019**, 48, 9.
- [7] L. Mai, Z. Giedraityte, M. Schmidt, D. Rogalla, S. Scholz, A. D. Wieck, A. Devi, M. Karppinen, *J. Mater. Sci.* **2017**, 52.

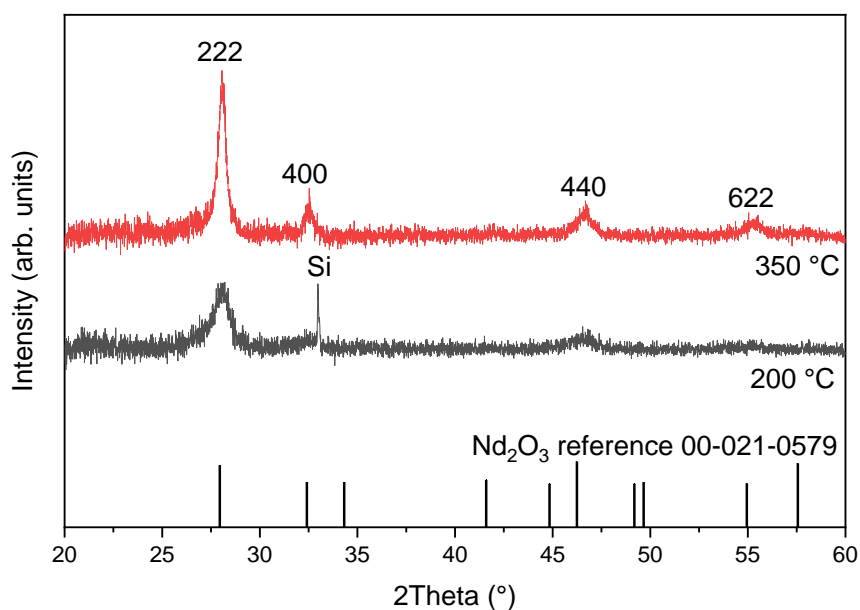


Figure 1. XRD patterns of Nd_2O_3 thin films deposited with $[\text{Nd}(\text{DPAMD})_3]$ at temperatures of 200 °C and 350 °C on Si substrates.

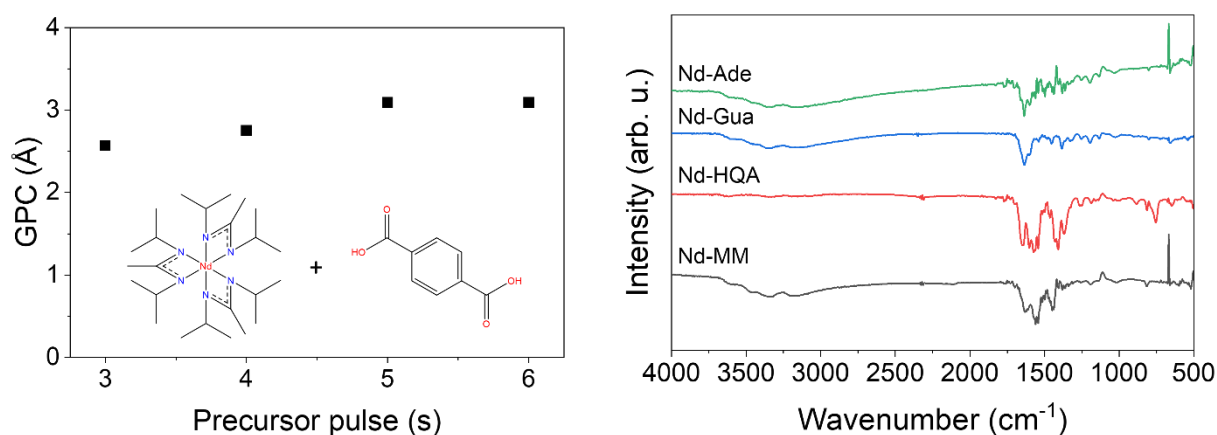


Figure 2. Saturation of the $[\text{Nd}(\text{DPAMD})_3]$ pulse in the Nd-TPA process (left) and FT-IR spectra of the ALD/MLD layers obtained with melamine (MM), 2-hydroxyquinoline-4-carboxylic acid (HQA), guanidine (GUA) and adenine (Ade).