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A. Özdem Sezgin
Michael Vogel, Xin Jiang



LOT
Fak. IV, Department Maschinenbau
Universität Siegen



Status Quo and Next Steps

- ▶ **CC800 machine problems (since 25.09.2022):** been recently fixed and the system is back to operation.
- ▶ **Optimization studies of *the novel parameter window* for HiPIMS-NbN monolayers, mainly on Si so far:** been quite through with significant improvements on the resulted thin films, in particular in the form of **SS structure** applications. Further **DC magnetization and RF characterizations** as well as some of the **advanced materials characterizations** (e.g., TEM, SIMS, STS, PALS etc.) are to be conducted for **more fundamental understandings**.
- ▶ **HiPIMS-NbN multi-layer (SS and SIS) structures:** selective samples will be further studied along with their **optimum thickness optimizations**, with the priority given to the **AlN (PVD/PEALD-coated)** as the insulating layer in these SIS structures to be coated mainly on **copper** substrates too.
- ▶ **Hybrid-NbTiN:** the initial deposition parameter studies and the associated materials characterizations are being conducted.
- ▶ **Cu substrates:** Further development tests of the surface pre-treatment procedures (mechanical- and electro-polishing) are being carried out.

THANK YOU

FOR

YOUR ATTENTION !