

Investigation of silver paste deposition parameters for ceramic components

✓ Bachelor- / Studien- / Masterarbeit

Piezoelectric ceramic parts require thin layers of highly conductive metals to function as sensors and actuators. This becomes more complex when applied to ceramic geometries that are curved or bent. One possibly suitable method is dip-coating the ceramic body in a low viscosity silver paste solution. The process parameters and possible preparation steps of ceramic bodies prior to silver must be identified and systematically investigated.

Tasks:

- Manufacture ceramic components and prepare them for silver plating
- Investigate silver plating process parameters systematically
- Characterize conductivity and adhesion of silver electrodes

Nature of the study: Experimental work with chemicals

You will learn: ceramic part processing and cleaning, working with chemicals, operation of sintering ovens, use of microscope, use of various measurement devices

Additional information:

- You select language of the work, either German or English
- Multiple works on same topic possible (e.g. Studienarbeit + Masterarbeit)



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