

GERNGROSS, M.-D., SPRINCEAN, Veaceslav, LEISNER, M., CARSTENSEN, J, FÖLL, H, TIGINYANU, Ion. Porous InP as Piezoelectric Component in Magneto-Electric Composite Sensors. In: ECS Transactions. 2011, Vol.35 (8), pp. 67-72.

We report on the fabrication of cheap piezoelectric porous InP templates by electrochemical etching and additional purely chemical post-etching and on the galvanic filling of the resulting nanopore array with Ni-Fe using a highly viscous electrolyte. The d_{14} component of porous InP is found to be around a stunning $|60|$ pm/V. The deposited Ni-Fe shows a very narrow hysteresis loop with low coercive field strength (170 G) and very low remanence (0.005 emu).