

Cost Efficient Thin Film Photovoltaics for Future Electricity Generation (ThinPV)**

Scope of project

ThinPV is a project with the mission to mobilize resources in thin film photovoltaics by performing world-class research and development that targets breakthroughs in photovoltaic device efficiency, and cost efficient production. The project is structured into three main parts, part A being oriented towards the short term improvement of plasma deposition processes of thin silicon films, part B addressing hybrid solar cells on the medium to long term and combining dye sensitized solar cells (DSC), Cu(In,Ga)Se₂ solar cells (CIGS) as well as polymer solar cells (OPV). Part C is defined to be an exchange platform to allow for workshops and educational activities.

Contact

Dr. Frank Nüesch, EMPA
Telephone: +41 44 823 4740
frank.nueesch@empa.ch



Simulation of the electron density in the breakdown chamber at 5 and 0.8 mbar. Higher densities translate to righter colours. The RF potential was applied to the top edge of the simulated region. The left edge is the symmetry axis, the bottom edge and the cylinder on the left are at ground potential, and the right edge is electric insulation.

At five mbar (top), the breakdown occurs in the smaller gap atop the cylinder on the left, while at 0.8 mbar (bottom) the breakdown occurs in the wider gap to the right. The highest electric field would be right at the corner of the small cylinder, but clearly this has no perceptible effect on the electron density.

**) Finished project