Poling Silica and Silica Fibre

Following on from Prof. Fleming’s Research Bite where he introduced the topic of poling, in this Applied and Plasma seminar Simon will take a deeper look at Simon's and Dr Honglin An’s research on the poling mechanism. Poling is a process for inducing a second-order non-linearity or electro-optic effect in optical materials. It involved applying an intense electric field and a stimulus such as heat. The main mechanism involved is the migration and trapping of charges. This is greatly influenced by the materials and interfaces between them and the seminar will present results of our work on second-harmonic microscopy that sheds light on this mechanism. Results indicating other interesting material changes will also be presented.