Signal processing and control for Graphene applications

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The road from fundamental materials research to its commercial use is never easy. Graphene is an example of one such material, full of application promise with many more uses waiting to be discovered. Graphene photonics, flexible electronic, fuel cells, sensors, resonators, amongst others, require signal detection and manipulation in a wide frequency range. Zurich Instruments provides measurement solutions in the form of lock-in amplifiers, phase locked-loops, impedance analyzers, boxcar averagers and arbitrary waveform generators spanning from DC up to 600 MHz. These comprehensive measurement and signal generation platforms allow for fast data acquisition and signal control and are used both in the early stages of research and development as well as in industrial settings for fast quality control and non-destructive testing.

In this talk we commence with few examples of measurements involving graphene in a nano-electronics application and follow these with an overview of various measurement and signal control possibilities using Zurich Instruments products. The talk is intended to provide the audience with inspiration for their current and future measurements and open communication for application discussions.