

Abstract Submitted
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Time-resolved phase-sensitive second harmonic generation spectroscopy of electron injection at the water/air interface JAN VERLET, Durham University — A new methodology is developed to probe the real-time dynamics of species at interfaces based on phase-sensitive second harmonic generation. The key attributes of the method are that the measured signal is linear with concentration and can independently measure the real and imaginary part of the second-order non-linear susceptibility. We apply this methodology to probing the dynamics of the hydrated electron at the water/air interface, produced by charge-transfer-to-solvent from a precursor ion (iodide in this case). Preliminary results indicate a fast decay on a sub-picosecond timescale of the real (non-resonant) part of the second-order non-linear susceptibility, which we associate with the charge-transfer dynamics at the water/air interface.

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