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## Atomic and Molecular Physics Experiments with the REMI Endstation at FLASH2

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A multi-particle coincidence spectrometer for electrons and ions (Reaction-Microscope, REMI) has been installed at the XUV free-electron laser FLASH2 in Hamburg as a permanent endstation for measurements with dilute atomic and molecular targets. The station is equipped with a high-throughput (> 70%) split-delay and focusing optics for the FEL beam in front of the spectrometer that allows XUV-pump –XUV-probe experiments with femtosecond resolution (defined by the FEL pulse duration) at high intensities (several  $10^{15}$  W/cm<sup>2</sup>). In addition, the newly installed short-pulse IR pump-probe laser at FLASH2 can be used for XUV-IR type excitation schemes. Moreover, in collaboration with the University Hannover and DESY a separate XUV source based on high-harmonic generation is presently set up that will further extend the range of applications of the REMI station towards two-colour XUV pump-probe or transient absorption measurements. Besides these essentially technical aspects possible future applications as well as first results will be presented.

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