Ultrabroadband spectroscopy for security applications

Ultrabroadband spectroscopy is a promising novel approach to overcome two major hurdles which have so far limited the application of THz spectroscopy for security applications: the increased bandwidth enables to record several characteristic spectroscopic features and the technique allows for remote detection. However, for real applications several parameters still have to be optimized. A comprehensive evaluation of the potential of this technique includes for example a detailed study of the generation process in an air plasma. We present some aspects of our joint theoretical and experimental evaluation of the technique for defense and civil security applications.