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Title:Concurrent field enhancement and high transmission of THz radiation in nanoslit arrays Authors:Shalaby, Mostafa (1); Merbold, Hannes (2); Peccianti, Marco (1); Razzari, Luca (1); Sharma, Gargi (1); Ozaki, Tsuneyuki (1); Morandotti, Roberto (1); Feurer, Thomas (2); Weber, Anja (3); Heyderman, Laura (3); Patterson, Bruce (4); Sigg, Hans (3)

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Abstract:We experimentally and numerically investigate the transmission of THz radiation through uniform nanoslit arrays. These structures are capable of inducing plasmon-mediated field enhancement while concurrently providing high field transmission. Combined with intense THz radiation, estimated field strengths as high as 26 MV/cm are obtained in the near-field regime which will facilitate nonlinear THz experiments.

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