321. Title:THz generation from a nanocrystalline silicon-based photoconductive device
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Abstract:Terahertz generation has been achieved from a photoconductive switch based on hydrogenated nanocrystalline silicon (nc-Si:H), gated by a femtosecond laser. The nc-Si:H samples were produced by a hot wire chemical vapour deposition process, a process with low production costs owing to its higher growth rate and manufacturing simplicity. Although promising ultrafast carrier dynamics of nc-Si have been previously demonstrated, this is the first report on THz generation from a nc-Si:H material.