

conclude that a combination of these two mechanisms, interband excitation and intraband acceleration, is responsible for terahertz-driven HHG in solids. However, for high-order (12th–17th) harmonics, they find that intraband acceleration is the dominant mechanism.

One limitation in HHG at terahertz frequencies, however, is phase matching. The harmonics below the bandgap strongly suffer from phase mismatching, which limits the output yields<sup>10</sup>. This could be potentially mitigated by engineering the bulk crystal with arbitrary structures. Material damage is another issue that could limit further scaling of applied electric fields. Although multiphoton excitation can be suppressed by using low photon energies, intense interband polarization can produce enough electron–hole pairs to induce material breakdown. Also, HHG driven by terahertz pulses may not be suitable for synthesizing sub-femtosecond pulses because of their long driving wavelengths.

Nonetheless, the experiment conducted by Schubert and colleagues sheds new

light on ultrafast coherent transport in solids biased by intense terahertz fields, with potential applications in extremely fast electronic switching at terahertz rates. In practice, their coherent high harmonics with a record-high radiation bandwidth of 0.1–675 THz could be used for ultrafast broadband spectroscopy. In addition, the extremely high field strength of  $72 \text{ MV cm}^{-1}$  provides a peak intensity of  $6.5 \times 10^{12} \text{ W cm}^{-2}$ , which is high enough to tunnel ionize certain atomic or molecular gases. Additional boosts in the field strength at even longer wavelengths will open up new opportunities to study ideal tunnelling ionization of atoms in a strong, quasi-direct-current field. □

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#### References

1. Corkum, P. B. & Krausz, F. *Nature Phys.* **3**, 381–387 (2007).
2. Ghimire, S. *et al.* *Nature Phys.* **7**, 138–141 (2011).
3. Tonouchi, M. *Nature Photon.* **1**, 97–105 (2007).

4. Schubert, O. *et al.* *Nature Photon.* **8**, 119–123 (2014).
5. Sell, A., Leitenstorfer, A. & Huber, R. *Opt. Lett.* **33**, 2767–2769 (2008).
6. Corkum, P. B. *Phys. Rev. Lett.* **71**, 1994–1997 (1993).
7. Zaks, B., Liu, R. B. & Sherwin, M. S. *Nature* **483**, 580–583 (2012).
8. Bloch, F. *Z. Phys.* **52**, 555–600 (1929).
9. Földi, P., Benedict, M. G. & Yakovlev, V. S. *New J. Phys.* **15**, 063019 (2013).
10. Ghimire, S. *et al.* *Phys. Rev. A* **85**, 043836 (2012).

#### Correction

In the reply of Maret *et al.* in the Correspondence entitled “Inelastic scattering puts in question recent claims of Anderson localization of light” (*Nature Photon.* **7**, 934–935; 2013), the affiliations of authors Andreas Lubatsch and Regine Frank were incorrectly given. Their correct affiliations are as follows: Andreas Lubatsch is at Electrical Engineering, Precision Engineering, Information Technology, Georg-Simon-Ohm University of Applied Sciences, Kesslerplatz 12, 90489 Nürnberg, Germany and Regine Frank is at Institut für Theoretische Physik, Auf der Morgenstelle 14, Eberhard-Karls-University, 72076 Tübingen, Germany. This error has been corrected in both the HTML and PDF versions of the Correspondence.