

Attosecond pulse generation using high harmonics in the multicycle regime of the driver pulse

Le Kien F., Midorikawa K., Suda A.

Inst. of Phys. and Chemical Research, Hirosawa 2-1, Wako-shi, Saitama 351-0198, Japan; Department of Physics, University of Hanoi, Hanoi, Viet Nam

Abstract: High-harmonic generation in He atoms illuminated by high-intensity femtosecond excitation pulses is studied. It is shown that single attosecond pulses as well as trains of several attosecond pulses, one per half a period, can be generated in the multicycle regime of the driver pulse.

Year: 1998

Source title: Physical Review A - Atomic, Molecular, and Optical Physics

Volume: 58

Issue: 4

Page : 3311-3319

Cited by: 31

Link: Scopus Link

Correspondence Address: Le Kien, F.; Inst. of Phys. and Chemical Research, Hirosawa 2-1, Wako-shi, Saitama 351-0198, Japan

ISSN: 10502947

CODEN: PLRAA

Language of Original Document: English

Abbreviated Source Title: Physical Review A - Atomic, Molecular, and Optical Physics

Document Type: Article

Source: Scopus

Authors with affiliations:

1. Le Kien, F., Inst. of Phys. and Chemical Research, Hirosawa 2-1, Wako-shi, Saitama 351-0198, Japan, Department of Physics, University of Hanoi, Hanoi, Viet Nam
2. Midorikawa, K., Inst. of Phys. and Chemical Research, Hirosawa 2-1, Wako-shi, Saitama 351-0198, Japan
3. Suda, A., Inst. of Phys. and Chemical Research, Hirosawa 2-1, Wako-shi, Saitama 351-0198, Japan

References:

1. Chang, Z., Rundquist, A., Wang, H., Murnane, M.M., Kapteyn, H.C., (1997) Phys. Rev. Lett., 79, p. 2967
2. Spielmann, Ch., Burnett, N.H., Sartania, S., Koppitsch, R., Schn?rer, M., Kan, C., Lenzner, M., Krausz, F., (1997) Science, 278, p. 661
3. Bouhal, A., Evans, R., Grillon, G., Mysyrowicz, A., Breger, P., Agostini, P., Constantinescu, R.C., Von Der Linde, D., (1997) J. Opt. Soc. Am. B, 14, p. 950
4. Christov, I.P., Zhou, J., Peatross, J., Rundquist, A., Murnane, M.M., Kapteyn, H.C., (1996) Phys. Rev. Lett., 77, p. 1743
5. Sali??res, P., L'Huillier, A., Lewenstein, M., (1995) Phys. Rev. Lett., 74, p. 3776
6. Kan, C., Burnett, N.H., Capjack, C.E., Rankin, R., (1997) Phys. Rev. Lett., 79, p. 2971

7. H??nsch, T.W., (1990) Opt. Commun., 80, p. 71
8. Farkas, G., T??th, C., (1992) Phys. Lett. A, 168, p. 447
9. Harris, S.E., Macklin, J.J., H??nsch, T.W., (1993) Opt. Commun., 100, p. 487
10. Corkum, P.B., Burnett, N.H., Ivanov, M.Y., (1994) Opt. Lett., 19, p. 1870
11. Antoine, P., L'Huillier, A., Lewenstein, M., (1996) Phys. Rev. Lett., 77, p. 1234
12. Schafer, K.J., Kulander, K.C., (1997) Phys. Rev. Lett., 78, p. 638
13. Christov, I.P., Murnane, M.M., Kapteyn, H.C., (1997) Phys. Rev. Lett., 78, p. 1251
14. Antoine, P., Miloevi?, D.B., LHuillier, A., Gaarde, M.B., Sali??res, P., Lewenstein, M., (1997) Phys. Rev. A, 56, p. 4960
15. Corkum, P.B., (1993) Phys. Rev. Lett., 71, p. 1994
16. Kulander, K.C., Schafer, K.J., Krause, J.L., (1993) Super Intense Laser-Atom Physics, 316. , NATO Advanced Studies Institute Series B: Physics, edited by B. Piraux et al. Plenum, New York
17. Lewenstein, M., Balcou, Ph., Ivanov, M.Yu., L'Huillier, A., Corkum, P.B., (1994) Phys. Rev. A, 49, p. 2117
18. Ammosov, M.V., Delone, N.B., Krainov, V.P., (1986) Zh. Eksp. Teor. Fiz., 91, p. 2008
19. (1986) Sov. Phys. JETP, 64, p. 1191