

MENU

[Full text at publisher](#)[Export ▾](#)[Add To Marked List](#)< 1 of 583 >

Generation of adiabatic pulses

By: [Lumb, S](#) (Lumb, Sonia) ^[1]; [Talwar, SL](#) (Talwar, Shalini Lumb) ^[2]; [Bahar, MK](#) (Bahar, Mustafa Kemal) ^[3]; [Prasad, V](#) (Prasad, Vinod) ^[4]

PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES

Volume: 144

Article Number: 115431

DOI: 10.1016/j.physe.2022.115431

Published: OCT 2022

Indexed: 2023-01-29

Document Type: Article

Abstract:

A two-dimensional GaAs/AlGaAs quantum disk under the influence of a non-central potential resulting in azimuthal distortion, subjected to an external static electric field, is exposed to a linearly polarized laser pulse. Adiabatic magnetic pulses are found to be generated due to the introduction of distortion in the system. The magnitude of distortion is expected to serve as one of the crucial control parameters for the manipulation of the generated magnetic pulses. The production of desired magnetic pulses may prove beneficial in many bio-medical applications.

Keywords

Author Keywords: [Adiabatic magnetic pulses](#); [Azimuthal distortion](#); [Quantum disk](#); [Charge-currents](#); [Induced magnetic field](#)

Keywords Plus: [MAGNETIC-FIELDS](#); [RING CURRENTS](#); [SIMULATIONS](#)

Author Information

Corresponding Address: Prasad, Vinod (corresponding author)

▲ Univ Delhi, Swami Shraddhanand Coll, Dept Phys, Delhi 110036, India

Affiliation

University of Delhi

Addresses:

¹ ▲ Univ Delhi, Rajdhani Coll, Dept Phys & Elect, New Delhi 110015, India

Affiliation

University of Delhi

² ▲ Univ Delhi, Maitreyi Coll, Dept Phys, New Delhi 110021, India

Affiliation

University of Delhi

³ ▼ Sivas Cumhuriyet Univ, Dept Phys, TR-58140 Sivas, Turkey

⁴ ▲ Univ Delhi, Swami Shraddhanand Coll, Dept Phys, Delhi 110036, India

Affiliation

University of Delhi

E-mail Addresses: shalini_lumb@hotmail.com; vprasad@ss.du.ac.in

Categories/ Classification

Research Areas: [Science & Technology - Other Topics](#); [Physics](#)

Citation Topics: [5 Physics](#) > [5.107 Laser Science](#) > [5.107.475 High-Order Harmonic Generation](#)

Web of Science Categories: [Nanoscience & Nanotechnology](#); [Physics, Condensed Matter](#)

+ [See more data fields](#)

19



Journal information

PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES

ISSN: 1386-9477

eISSN: 1873-1759

Current Publisher: ELSEVIER, RADARWEG 29, 1043 NX AMSTERDAM, NETHERLANDS

Journal Impact Factor: Journal Citation Reports™

Research Areas: Science & Technology - Other Topics; Physics

Web of Science Categories: Nanoscience & Nanotechnology; Physics, Condensed Matter

3.369

Journal Impact
Factor™ (2021)

0.58

Journal Citation
Indicator™
(2021)

New

Citation Network

In Web of Science Core Collection

1

Citation

 Create citation alert

1

Times Cited in All Databases


[+ See more times cited](#)

39

Cited References

[View Related Records](#)Citing items by classification New

Breakdown of how this article has been mentioned, based on available citation context data and snippets from 1 citing item(s).

Background	 1
Basis	0
Support	0
Differ	0
Discuss	0

You may also like...

MORONI, S; FANTONI, S; SENATORE, G;

[OPTIMIZATION OF 3-BODY CORRELATIONS IN LIQUID-HELIUM](#)
EUROPHYSICS LETTERS

Shenvi, N; de Sousa, R; Whaley, KB;

[Universal scaling of hyperfine-induced electron spin echo decay](#)
PHYSICAL REVIEW B

Chen, C; Xu, XY; Meng, ZY; et al.

[Symmetry-enforced self-learning Monte Carlo method applied to the Holstein model](#)
PHYSICAL REVIEW B

Miyamachi, T; Schuh, T; Wulfhekkel, W; et al.

[Stabilizing the magnetic moment of single holmium atoms by symmetry](#)
NATURE

Posske, T; Chiu, CK; Thorwart, M;

[Vortex Majorana braiding in a finite time](#)
PHYSICAL REVIEW RESEARCH[See all](#)

19

Most Recently Cited by

Pereira, LFC; Silva, EO;
[Modification of Landau Levels in a 2D Ring Due to Rotation Effects and Edge States](#)
ANNALEN DER PHYSIK

Use in Web of Science

Web of Science Usage Count

1

Last 180 Days

1

Since 2013

[Learn more](#)

This record is from:

Web of Science Core Collection

- Science Citation Index Expanded (SCI-EXPANDED)

Suggest a correction

If you would like to improve the quality of the data in this record, please [Suggest a correction](#)

39 Cited References

Showing 30 of 39

[View as set of results](#)

(from Web of Science Core Collection)

© 2022
Clarivate
Training Portal
Product
Support

Data Correction
Privacy
Statement
Newsletter

Copyright
Notice
Cookie Policy
Terms of Use

Tanımlama Bilgisi
Ayarları

Follow
Us

