

TURKISH JOURNAL OF **PHYSICS**

http://journals.tubitak.gov.tr/physics/



Published by the Scientific and Technological Research Council of Turkey

TURKISH JOURNAL OF PHYSICS

Editor-in-Chief

Alikram NUHBALAOĞLU TUBITAK Research Institute for Fundamental Sciences, Turkey Associate Editor in Chief Muhammed Mirac SERİM Atılım University, Turkey

VOLUME 46 • ISSUE 3 • 2022 ISSN 1300-0101 • E-ISSN 1303-6122

SCOPE

- The Turkish Journal of Physics is published electronically 6 times a year by the Scientific and Technological Research Council of Turkey (TÜBİTAK).
- The Journal accepts English-language manuscripts and contribution is open to researchers of all nationalities.
- The Journal covers experimental and theoretical results in various branches of physics and astronomy such as atomic and molecular physics, optics, condensed matter physics, nuclear physics, particle physics, statistical physics, astrophysics, mathematical physics, field theory, gravity, cosmology as well as interdisciplinary topics related to physics.
- The Journal welcomes publications of the following types: research articles, review articles (by invitation only), focus issue articles devoted to advances in frontier areas of physics as well as special issues with high-quality conference proceedings.

EDITORIAL BOARD

- Abdulmecit TURUT, İstanbul Medeniyet University, Turkey
- Adem TEKIN, Istanbul Technical University, Turkey .
- Ali COSKUN, University of Fribourg, Switzerland
- Ali MOSTAFAZADEH, Koç University, Turkey
- Cevdet COSKUN, Giresun University, Turkey
- Ceyhun BULUTAY, Bilkent University, Turkey
- Emre ERDEM, Sabancı University, Turkey
- Emre GÜR, Atatürk University, Turkey .
- Ersin GÖĞÜŞ, Sabancı University, Turkey
- Isao TANAKA, Kyoto University, Japan
- Kazem AZİZİ, Doğuş University, Turkey
- Kemal ÖZDOĞAN, Yıldız Technical University, Turkey

- Nihat BERKER, Kadir Has University, Turkey •
- Oğuz GÜLSEREN, Bilkent University, Turkey .
- Özgür AKARSU, İstanbul Technical University, Turkey
- Özgür MÜSTEÇAPLIOĞLU, Koç University, Turkey •
- Samir MATHUR, Ohio State University, U.S.A. •
- Savaş BERBER, Gebze Technical University, Turkey
- Selçuk BİLİR, İstanbul University, Turkey
- Subir SARKAR, University of Oxford, United Kingdom •
- Tansu DAYLAN, Massachusetts Institute of Technology, U.S.A.
- Uğur SERİNCAN, Eskişehir Technical University, Turkey
- Vahid KARIMIPOUR, Sharif University of Technology, Iran
- Yıldırım AYDOĞDU, Gazi University, Turkey

ABSTRACTED

- **Emerging Sources Citation Index**
- Scopus
- Academic Search Complete
- Inspec

CONTENTS

Relativistic tunneling through two "transparent"	successive barriers	 113
Massimo GERMANO		