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## Nonlinear optical characteristics of thermodynamic effects- and electric field-triggered Mathieu quantum dot

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MICRO AND NANOSTRUCTURES

Volume: 170

Article Number: 207371

DOI: 10.1016/j.micrna.2022.207371

Published: OCT 2022

Early Access: AUG 2022

Indexed: 2022-10-12

Document Type: Article

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### Abstract:

In this work, the total refractive index (TRICs) and total absorption coefficients (TACs) of a spherical quantum dot with the Mathieu potential encompassment, generated by using InxGa1-xAs/GaAs heterostructure, and including hydrogenic impurity in its center, under the influence of the temperature, hydrostatic pressure and external electric field are investigated. The compact density matrix formalism and the iterative method are employed to compute the nonlinear optical features. The relevant eigenvalue equation of the Mathieu quantum dot (MQD) is solved by constructing a tridiagonal matrix formalism, within the effective mass approach. As well as the response of TRICs and TACs to external parameters, the alterations concerning structure parameters such as doping concentration and restriction width are also examined. To the best of our knowledge, the external influences and structural parameters on the optical specifications of MQD containing the central impurity are theoretically taken into consideration, for the first time, in the present work. Determining the optimality of optical properties arising from structural and external parameter changes is crucial in terms of providing a theoretical basis for the experimental production and practical use of MQD.

### Keywords

**Author Keywords:** [Total refractive index](#); [Total absorption coefficients](#); [Mathieu quantum dot](#); [Hydrogenic impurity](#); [Hydrostatic pressure](#); [External electric field](#)**Keywords Plus:** [HYDROSTATIC-PRESSURE](#); [2ND-HARMONIC GENERATION](#); [HYDROGENIC-IMPURITY](#); [MAGNETIC-FIELDS](#); [GROUND-STATE](#); [BAND-GAP](#); [TEMPERATURE](#); [RECTIFICATION](#); [GAAS](#); [SEGREGATION](#)

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### Journal information

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**Current Publisher:** ACADEMIC PRESS LTD- ELSEVIER SCIENCE LTD, 24-28 OVAL RD, LONDON NW1 7DX, ENGLAND**Research Areas:** [Physics](#)**Web of Science Categories:** [Physics](#), [Condensed Matter](#)

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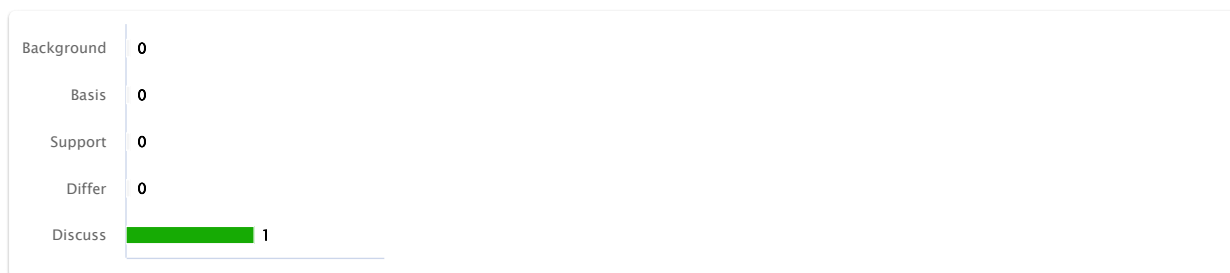
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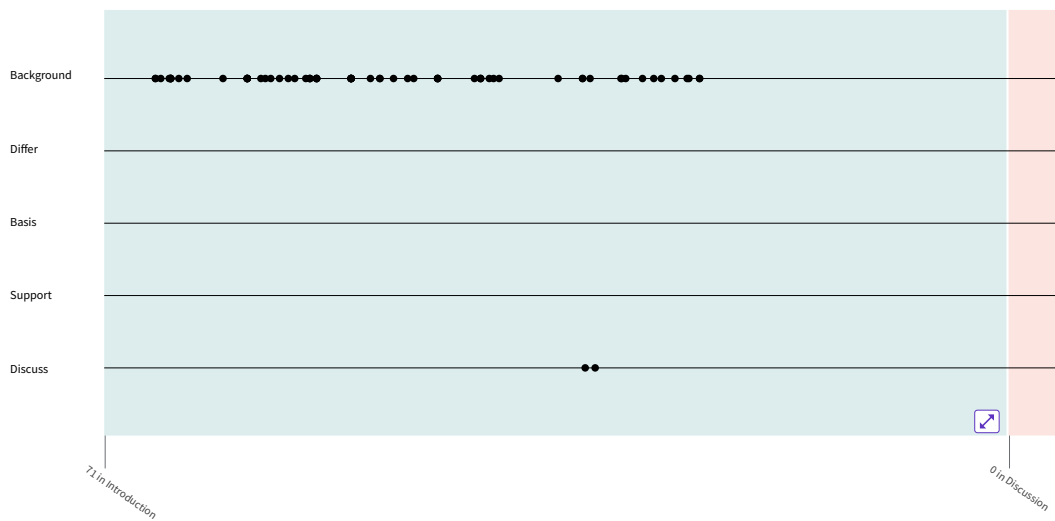
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6	<p>[Not available]</p> <p><a href="#">Fu, K</a> 2009   Growth Dynamics of Semiconductor Nanostructures by MOCVD Printed by Universitets service US AB, Stockholm, Sweden</p> <p>Cited in Article: 1</p>	<p>1 Citation</p> <hr/> <p>0 References</p>
7	<p><b>Stark-shift of impurity fundamental state in a lens shaped quantum dot</b></p> <p><a href="#">Aderras, L</a>; <a href="#">Bah, A</a>; (...); <a href="#">Duque, CA</a> May 2017   PHYSICA E-LOW-DIMENSIONAL SYSTEMS &amp; NANOSTRUCTURES 89 , pp.119-123</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>14 Citations</p> <hr/> <p>41 References</p> <hr/> <p><a href="#">Related records</a></p>
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18	<p>[Not available]</p> <p><a href="#">Faist, J.</a> 2013   QUANTUM CASCADE LASE Oxford University Press</p> <p>Cited in Article: 1</p>	<p>288 Citations</p> <hr/> <p>0 References</p>
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25	<p><a href="#">Semiconductor quantum dotstowards a new generation of semiconductor devices</a></p> <p><a href="#">Jacak, L</a> Nov. 2000   European Journal of Physics 21 (6) , pp.487-97</p> <p>Cited in Article: 1</p>	<p>27 Citations</p> <hr/> <p>0 References</p>
26	<p><a href="#">The effect of hydrostatic pressure on the electronic and optical properties of InP</a></p> <p><a href="#">Bouarissa, N</a> Dec 2000   SOLID-STATE ELECTRONICS 44 (12) , pp.2193-2198</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>59 Citations</p> <hr/> <p>30 References</p> <hr/> <p><a href="#">Related records</a></p>
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	1985   JOURNAL OF APPLIED PHYSICS 58 (3) , pp.R1-R29 <a href="#">Full Text at Publisher</a> ... Cited in Article: 2	<a href="#">References</a> <hr/> <a href="#">Related records</a>
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31	[Not available] <a href="#">Davies, J. H.</a> 1998   The Physics of Low-dimensional Semiconductors: An Introduction Cambridge University Press, Cambridge  Cited in Article: 1	<b>670</b> Citations <hr/> <b>0</b> References
32	<b>Nonlinear Optics, 3rd Edition</b> <a href="#">Boyd, RW</a> 2008   NONLINEAR OPTICS, 3RD EDITION , pp.1-613 <a href="#">View full text</a> ... Cited in Article: 5	<b>3,466</b> Citations <hr/> <b>0</b> References
33	<b>Polaronic enhancement in the ground-state energy of an electron bound to a Coulomb impurity in a parabolic quantum dot</b> <a href="#">Mukhopadhyay, S</a> and <a href="#">Chatterjee, A</a> Apr 15 1997   PHYSICAL REVIEW B 55 (15) , pp.9279-9281 <a href="#">Full Text at Publisher</a> ... Cited in Article: 1	<b>56</b> Citations <hr/> <b>26</b> References <hr/> <a href="#">Related records</a>
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35	<p><b>HYDROGENIC-IMPURITY GROUND-STATE IN GAAS-GA1-XALXAS MULTIPLE QUANTUM-WELL STRUCTURES</b></p> <p><a href="#">CHAUDHURI, S</a> 1983   PHYSICAL REVIEW B 28 (8) , pp.4480-4488</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 2</p>	<p><a href="#">Related records</a></p> <p><b>142</b> Citations</p> <hr/> <p><b>11</b> References</p> <hr/> <p><a href="#">Related records</a></p>
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39	<p><b>GA<sub>0.47</sub>IN<sub>0.53</sub>AS - A TERNARY SEMICONDUCTOR FOR PHOTODETECTOR APPLICATIONS</b></p> <p><a href="#">PEARSALL, TP</a> 1980   IEEE JOURNAL OF QUANTUM ELECTRONICS 16 (7) , pp.709-720</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p><a href="#">Related records</a></p> <p><b>122</b> Citations</p> <hr/> <p><b>65</b> References</p> <hr/> <p><a href="#">Related records</a></p>
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41		<p><b>5</b></p>

	<p>Hydrostatic pressure and temperature effects on spectrum of an off-center single dopant in a conical quantum dot with spherical edge</p> <p><a href="#">Chnafi, M</a>; <a href="#">Belamkadem, L</a>; (...); <a href="#">Duque, CA</a> Nov 2021   Oct 2021 (Early Access)   SUPERLATTICES AND MICROSTRUCTURES 159</p> <p> Enriched Cited References</p> <p> <a href="#">View full text</a> ...</p> <p>Cited in Article: 1</p>	<p>Citations</p> <hr/> <p>40</p> <p>References</p> <hr/> <p><a href="#">Related records</a></p>
42	<p>Molecular Beam Epitaxy of Ultra-High-Quality AlGaAs/GaAs Heterostructures: Enabling Physics in Low-Dimensional Electronic Systems</p> <p><a href="#">Manfra, MJ</a> 2014   ANNUAL REVIEW OF CONDENSED MATTER PHYSICS, VOL 5 5 , pp.347-373</p> <p> <a href="#">Free Submitted Article From Repository</a> <a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>Citations</p> <hr/> <p>86</p> <p>References</p> <hr/> <p>131</p> <p>References</p> <hr/> <p><a href="#">Related records</a></p>
43	<p>COMPARISON OF THE THEORETICAL AND EXPERIMENTAL DIFFERENTIAL GAIN IN STRAINED LAYER INGAAS/GAAS QUANTUM-WELL LASERS</p> <p><a href="#">LESTER, LF</a>; <a href="#">OFFSEY, SD</a>; (...); <a href="#">EASTMAN, LF</a> Sep 2 1991   APPLIED PHYSICS LETTERS 59 (10) , pp.1162-1164</p> <p> <a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>Citations</p> <hr/> <p>25</p> <p>References</p> <hr/> <p>18</p> <p>References</p> <hr/> <p><a href="#">Related records</a></p>
44	<p>On the anomalous Stark effect in a thin disc-shaped quantum dot</p> <p><a href="#">Oukerroum, A</a>; <a href="#">Fedji, E</a>; (...); <a href="#">Assaid, E</a> Sep 22 2010   JOURNAL OF PHYSICS-CONDENSED MATTER 22 (37)</p> <p> <a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>Citations</p> <hr/> <p>28</p> <p>References</p> <hr/> <p>53</p> <p>References</p> <hr/> <p><a href="#">Related records</a></p>
45	<p>Nonlinear optical rectification and optical absorption in GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As asymmetric double quantum wells: Combined effects of applied electric and magnetic fields and hydrostatic pressure</p> <p><a href="#">Karabulut, I</a>; <a href="#">Mora-Ramos, ME</a> and <a href="#">Duque, CA</a> Jul 2011   JOURNAL OF LUMINESCENCE 131 (7) , pp.1502-1509</p> <p> <a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>Citations</p> <hr/> <p>117</p> <p>References</p> <hr/> <p>34</p> <p>References</p> <hr/> <p><a href="#">Related records</a></p>
46	<p>Few-electron ground states of charge-tunable self-assembled quantum dots</p> <p><a href="#">Miller, BT</a>; <a href="#">Hansen, W</a>; (...); <a href="#">Petroff, PM</a> Sep 15 1997   PHYSICAL REVIEW B 56 (11) , pp.6764-6769</p> <p> <a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>Citations</p> <hr/> <p>241</p> <p>References</p> <hr/> <p>30</p> <p>References</p> <hr/> <p><a href="#">Related records</a></p>
47	<p>Path-integral approach for electron-phonon interaction effects in harmonic quantum dots</p>	<p>Citations</p> <hr/> <p>29</p> <p>References</p> <hr/>

	<p><a href="#">Mukhopadhyay, S</a> and <a href="#">Chatterjee, A</a> Oct 10 1996   INTERNATIONAL JOURNAL OF MODERN PHYSICS B 10 (22) , pp.2781-2796</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>55 References</p> <hr/> <p><a href="#">Related records</a></p>
48	<p>The effect of hydrostatic pressure on the diamagnetic susceptibility of a magneto-donor in a GaAs cylindrical quantum dot</p> <p><a href="#">Edrissi, SJ</a>; <a href="#">Zorkanj, J</a>; (...); <a href="#">Leontie, L</a> Jan-feb 2019   OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS 13 (1-2) , pp.111-115</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>2 Citations</p> <hr/> <p>18 References</p> <hr/> <p><a href="#">Related records</a></p>
49	<p>Strained-layer quantum well materials grown by MOCVD for diode laser application</p> <p><a href="#">Mawst, LJ</a>; <a href="#">Kim, H</a>; (...); <a href="#">Tansu, N</a> Jan 2021   Mar 2021 (Early Access)   PROGRESS IN QUANTUM ELECTRONICS 75</p> <p><a href="#">Free Full Text From Publisher</a> ...</p> <p>Cited in Article: 2</p>	<p>5 Citations</p> <hr/> <p>212 References</p> <hr/> <p><a href="#">Related records</a></p>
50	<p>The nonlinear optical rectification and second harmonic generation in asymmetrical Gaussian potential quantum well: Effects of hydrostatic pressure, temperature and magnetic field</p> <p><a href="#">Liu, X</a>; <a href="#">Zou, LL</a>; (...); <a href="#">Yuan, JH</a> Mar 2016   OPTICAL MATERIALS 53 , pp.218-223</p> <p><a href="#">Free Full Text From Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>49 Citations</p> <hr/> <p>28 References</p> <hr/> <p><a href="#">Related records</a></p>
51	<p>Intersubband Optical Nonlinearity of GeSn Quantum Dots under Vertical Electric Field</p> <p><a href="#">Baira, M</a>; <a href="#">Salem, B</a>; (...); <a href="#">Ilahi, B</a> Apr 2019   MICROMACHINES 10 (4)</p> <p><a href="#">Free Full Text from Publisher</a> ...</p> <p>Cited in Article: 2</p>	<p>5 Citations</p> <hr/> <p>44 References</p> <hr/> <p><a href="#">Related records</a></p>
52	<p>HIGH-PRESSURE STUDY OF PHOTOLUMINESCENCE IN INDIUM-PHOSPHIDE AT LOW-TEMPERATURE</p> <p><a href="#">MENONI, CS</a>; <a href="#">HOCHHEIMER, HD</a> and <a href="#">SPAIN, JL</a> Apr 15 1986   PHYSICAL REVIEW B 33 (8) , pp.5896-5898</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>44 Citations</p> <hr/> <p>16 References</p> <hr/> <p><a href="#">Related records</a></p>
53	<p>Structural and optical studies of In<sub>x</sub>Ga<sub>1-x</sub>As/GaAs multiple quantum wells</p> <p><a href="#">DiDio, M</a>; <a href="#">Lomascolo, M</a>; (...); <a href="#">Cingolani, R</a> Jul 1 1996   JOURNAL OF APPLIED PHYSICS 80 (1) , pp.482-489</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p>25 Citations</p> <hr/> <p>52 References</p>

		<a href="#">Related records</a>
54	<p><b>Size-dependent intersubband optical properties of dome-shaped InAs/GaAs quantum dots with wetting layer</b></p> <p><a href="#">Sabaeian, M</a> and <a href="#">Khaledi-Nasab, A</a>            Jun 20 2012   APPLIED OPTICS 51 (18) , pp.4176-4185</p> <p><a href="#">Free Published Article From Repository</a> <a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p><b>57</b> Citations</p> <hr/> <p><b>78</b> References</p> <hr/> <p><a href="#">Related records</a></p>
55	<p><b>MAGNETOOPTICS IN PARABOLIC QUANTUM DOTS</b></p> <p><a href="#">PEETERS, FM</a>            Jul 15 1990   PHYSICAL REVIEW B 42 (2) , pp.1486-1487</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p><b>204</b> Citations</p> <hr/> <p><b>7</b> References</p> <hr/> <p><a href="#">Related records</a></p>
56	<p><b>Study and optimization of structure InAs/InGaAs quantum dot in-a-well long-wave infrared photodetector</b></p> <p><a href="#">Lagraa, J</a>; <a href="#">Soudini, B</a>; (...); <a href="#">Taleb, S</a>            Feb 2022   Dec 2021 (Early Access)   OPTIK 251</p> <p><a href="#">View full text</a> ...</p> <p>Cited in Article: 1</p>	<p><b>4</b> Citations</p> <hr/> <p><b>22</b> References</p> <hr/> <p><a href="#">Related records</a></p>
57	<p><b>1-D Dirac equation in the presence of the Mathieu potential</b></p> <p><a href="#">Aghaei, S</a>; <a href="#">Chenaghlou, A</a> and <a href="#">Azadi, N</a>            Jul 12 2021   EUROPEAN PHYSICAL JOURNAL PLUS 136 (7)</p> <p><a href="#">View full text</a> ...</p> <p>Cited in Article: 1</p>	<p><b>2</b> Citations</p> <hr/> <p><b>49</b> References</p> <hr/> <p><a href="#">Related records</a></p>
58	<p><b>Donor impurity-related photoionization cross section in GaAs cone-like quantum dots under applied electric field</b></p> <p><a href="#">Igraoun, E</a>; <a href="#">Sali, A</a>; (...); <a href="#">Duque, CA</a>            2017   PHILOSOPHICAL MAGAZINE 97 (18) , pp.1445-1463</p> <p><a href="#">Full Text at Publisher</a> ...</p> <p>Cited in Article: 1</p>	<p><b>18</b> Citations</p> <hr/> <p><b>49</b> References</p> <hr/> <p><a href="#">Related records</a></p>
59	<p><b>Optical response of plasma processed quantum dot under the external fields</b></p> <p><a href="#">Kilic, K</a> and <a href="#">Bahar, MK</a>            Apr 5 2021   Nov 2020 (Early Access)   INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY 121 (7)</p> <p><a href="#">View full text</a> ...</p>	<p><b>5</b> Citations</p> <hr/> <p><b>38</b> References</p> <hr/> <p><a href="#">Related records</a></p>

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