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Conference abstracts

1. Tulupenko, R. Demediuk, V. Akimov, C. A. Duque, R. L. Restrepo, O. Fomina, T. Dmitrichenko, A. Tiutiunyk, A. Morales; **XII Workshop on Physics of Condensed and Molecular Matter XI TFMСyM-2018**, Cuernavaca, Mexico. June 18-20, 2018; “The model of a THz modulator based on a δ -doped QWs.”
2. R.Demediuk, A.Tiutiunyk, M.E.Mora-Ramos, C.A.Duque, V.Akimov, F.J.Carolopera, J.D.Correa, D.Laroze, V.Tulupenko, D.Sushchenko; **VIII Українська наукова конференція з фізики напівпровідників УНКФН-8**, Ужгород, 2-4 жовтня, 2018, т.1, ст.177; ‘Investigation of the optical-electronic properties of the graphene bi-layered QDs, with several shapes end edges’
3. Д.Сущенко, Р.Демедюк, V.Akimov, C.A.Duque, A.L.Morales, В.Тулупенко, О.Фоміна; **VIII Українська наукова конференція з фізики напівпровідників УНКФН-8**, Ужгород, 2-4 жовтня, 2018, т.1, ст.114; ‘ТГц-модулятор на основі дельта-легованої КЯ’
4. A. Tiutiunyk, R. Demediuk, M.E. Mora-Ramos, C.A. Duque, V. Akimov, D. Laroze, V. Tulupenko; **XII Taller de Fisica de la Materia Condensada y Molecular**, 18-20 червня 2018 р. ; ‘The model of a THz modulator based on a δ -doped QWs’
5. Ya. Kotov, R. Demediuk, V. Akimov, C.A. Duque, A. Tiutiunyk, D. Laroze, D. Sushenko, V. Tulupenko and O. Fomina; **International Conference for Professionals & Young Scientists LOW TEMPERATURE PHYSICS**; Kharkiv, June 3 - 7, 2019; “Delta-doped quantum wells and background impurities”
6. V. Tulupenko, A. Tiutiunyk, D. Laroze, V. Akimov, C.A. Duque, Ya. Kotov, D. Sushenko, R. Demediuk, O. Fomina; International research and practice conference: **NANOTECHNOLOGY AND NANOMATERIALS (NANO-2019)**; Lviv, August 27-30, p.597; “Influence of initial QW depth on the phenomena connected with delta-doping of the QW”
7. O. Fomina, A. Tiutiunyk, D. Laroze, V. Akimov, C.A. Duque, Ya. Kotov, D. Sushenko, R. Demediuk, V. Tulupenko; International research and practice conference: **NANOTECHNOLOGY AND NANOMATERIALS (NANO-2019)**; Lviv, August 27-30, p.607; “Delta-doped QWs and background impurities in barriers”
8. Demediuk, R., Akimov, V., Tiutiunyk, A., Duque, C., Sushchenko, D., Fomina, O., Morales, A., Laroze, D., Tulupenko, V., Poroshin V. 9th International Conference “**Nanotechnologies and Nanomaterials**” **NANO-2021**, 25 - 27 August 2021, Lviv, Ukraine; “The effect of a transversal electric field on the properties of the edge-delta-doped Si quantum well”
9. Demediuk, R., Tulupenko, V., Akimov, V., Tiutiunyk, A., Duque, C., Sushchenko, D., Fomina, O., Laroze, D. 10th International Conference “**Nanotechnologies and Nanomaterials**” **NANO-2022**, 25 – 27 August 2022, Lviv, Ukraine; “Quantum wells delta-doped to the center with background doping in barriers”
10. Demediuk, R., Tulupenko, V., Akimov, V., Tiutiunyk, A., Duque, C., Sushchenko, D., Fomina, O., Laroze, D. 11th International Conference “**Nanotechnologies and Nanomaterials**” **NANO-2023**, 16 – 19 August 2023, Bukovel, Ukraine; “Shallow impurities in delta-doped Si quantum well under a transversal electric field”

Scientific projects

1. НДР «Дослідження дельта легованих наноструктур з метою утворення перестроюваних електричним полем активних і пасивних приладів терагерцевого діапазону». Термін виконання з 01.01.2018 р. по 30.12.20 р.

№ держреєстрації 01180003046

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1. Study of delta-doped quantum wells: Energy levels and applications in the terahertz region/ V. Akimov, A. Tiutiunnyk, R. Demediuk, V. Tulupenko, E. Gomez, J. Cortes, P. Orellana, J. Silva, J. Corrales, J Gonzalez, R. Negrette, D. Paredes, M. Mora Ramos, J. Orozco, R. Restrepo, A. Morales, C.M. Duque, C. Duque. – Medellin – Antioquia: Editorial Instituto Antioqueno de Investigacion, 2022. – 181 p., (7.54 друк.а.)

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2. Дельта-леговані квантові ями для терагерцового діапазону спектра / В.М. Тулупенко, Р.О. Демедюк, О.С. Фоміна – Краматорськ : ДДМА, 2021. – 159 с., (6.6 друк.а.)

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Articles

1. O. Fomina, V. Tulupenko, R. Demediuk, V. Akimov, C. A. Duque, A.L. Morales and D. Sushchenko; International Conference on Terahertz Emission, X International Conference **TOPICAL PROBLEMS OF SEMICONDUCTOR PHYSICS**, Truskavets 26-29 June 2018, p.p. 21-24; “Background impurities and delta-doped QWs”

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2. V. Tulupenko, R. Demediuk, V. Akimov, C. A. Duque, A.L. Morales, D. Sushchenko and O. Fomina; International Conference on Terahertz Emission, X International Conference **TOPICAL PROBLEMS OF SEMICONDUCTOR PHYSICS**, Truskavets 26-29 June 2018, p.p.45-48; “On rearrangement of the energy spectrum of delta-doped QWs in the THz range”

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3. Viktor Tulupenko, Volodymyr Akimov, Roman Demediuk, Carlos Duque, Oksana Fomina and Dmitrii Sushchenko; **IEEE 39th International Conference on ELECTRONICS AND NANOTECHNOLOGY ELNANO-2019**; Kyiv, APRIL 16-18, 2019; “Effect of sparse doping in barriers on the energy structure of centerdelta-doped QW”, pp. 177–180

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4. V.Akimov, V.Tulupenko, C.A.Duque, A.L.Morales, R.Demediuk, A. Tiutunnyk, D. Laroze, V.Kovalov, and D.Sushchenko; **Semiconductor Science and Technology**, 34 (12); 2019, ‘Background impurities and a delta-doped QW. Part I: Center doping’

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5. Viktor Tulupenko, Volodymyr Akimov, Roman Demediuk, Anton Tiutiunnyk, Carlos Duque, Dmitrii Sushchenko, Oksana Fomina, Alvaro Morales, David Laroze; **IEEE 40th International Conference on ELECTRONICS AND NANOTECHNOLOGY ELNANO-2020**; Kyiv, APRIL 22-24, 2020; “Hydrogenic Impurity States in a Delta-Layer Within Quantum Wells in a Transversal Electric Field”, pp. 109–113

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7. Viktor Tulupenko, Volodymyr Akimov, Roman Demediuk, Anton Tiutiunnyk, Carlos Duque, Dmitrii Sushchenko, Oksana Fomina, Alvaro Morales, David Laroze; **IEEE 41th International Conference on ELECTRONICS AND NANOTECHNOLOGY ELNANO-2022**; Kyiv; “Intersubband Energy Differences of Delta-Doped Quantum Wells in External Electric Field”, pp. 133–136

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