Съдържание на публикациите, цитатите и проектите, с които се участва в настоящата процедура:

8.1. Списък с публикациите на доц. д-р Екатерина Йорданова, с които се участва в настоящата процедура

Научни публикации към група от показатели В - хабилитационен труд

показател 4 - научни публикации в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus)

B1 **E Iordanova**, G Yankov, S Karatodorov, L Kovachev, "Exceeding the boundaries of the paraxial spatio-temporal nonlinear optics and filamentation for ultrashort laser pulses", ACS Omega, (2022)
IF = 4.132, Q1
https://doi.org/10.1021/acsomega.2c07703

B2 **E. Iordanova**, G.Yankov, S.Karatodorov, L.Kovachev, „Diffraction-free femtosecond optics", Elsevier, Optik, 267 (2022)
IF = 2.443, Q2
https://doi.org/10.1016/j.ijleo.2022.169681

B3 G Yankov, **E Iordanova**, L Kovachev, „Radiation forces and compression of neutral particles by an optical lens", Elsevier, Optik, S0030-4026(22)01710-7 (2022)
IF = 2.443, Q2
https://doi.org/10.1016/j.ijleo.2022.170452
(удостоверение от кореспондиращия автор за съществен принос)

B4 N. Nedyalkov, N. E. Stankova, M. E. Koleva, R. Nikov, L. Alexandrov, R. Iordanova, **E. Iordanova**, G. Yankov, „Laser processing of noble metal doped glasses by femto- and nanosecond laser pulses", Applied Surface Science, 475 479-486,(2019) IF(2019) = 6.347, Q1
(удостоверение от кореспондиращия автор за съществен принос)
https://doi.org/10.1016/j.apsusc.2019.01.022

B5 **E. Iordanova,** G. Yankov, N. Stankova, N. Nedyalkov,"Modification and activation of the surface of medical-grade PDMS after irradiation by ultrashort laser pulses", Journal of Physics: Conference Series, IOP Publishing, 2240(1) 012051 (2022)
IF(2022) = 0.547, Q4
doi:10.1088/1742-6596/2240/1/012051

B6 Georgi Yankov, Nadya Stankova, **Ekaterina Iordanova**, "The effect of femtosecond laser pulse irradiation on the properties of advanced medical grade PDMS polymer", Comptes rendus de l'Académie bulgare des Sciences, Приета за печат с регистрационен номер № 321/2022 г.
(кореспондиращ автор)
IF(2021-2022) = 0.378, Q3

B7 Stankova, N.; Nikolov, A.; **Iordanova, E.;** Yankov, G.; Nedyalkov, N.; Atanasov, P.; Tatchev, D.; Valova, E.; Kolev, K.; Armyanov, S.; et al. "New Approach toward Laser-Assisted Approach toward Laser-AssistedModification of Biocompatible Polymers Relevant to Neural Interfacing Technologies" Polymers, 13 3004 (2021)
IF(2021) = 4.967, Q1
(удостоверение от кореспондиращия автор за съществен принос)
https://doi.org/10.3390/polym13173004

Научни публикации към група от показатели Г - извън хабилитационнен труд

Показател 7 - научни публикации в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus)

Г7-1 E Iordanova, G Yankov, A Daskalova, A Dikovska, L Angelova, D Aceti, E Filipov, G Stanev, B Calin, M Zamfirescu, "Ultra-short laser modification of chitosan/silver nanoparticles (AgNPs) thin films for potential antimicrobial applications", Journal of Physics: Conference Series Materials Science and Engineering 1056 012002 (2021)
SJR (2019): 0.198
doi:10.1088/1757-899X/1056/1/012002

Г7-2 Albena Daskalova, Liliya Angelova, Radostin Stefanov, Dragomir Tatchev, Georgi Avdeev, Lamborghini Sotelo, Silke Christiansen, Gerd Leuchs, Ekaterina Iordanova, Ivan Buchvarov „Ultra-short Laser Surface Properties Optimization of Biocompatibility Characteristics of 3D PCL and Hydroxyapatite Composite Scaffolds" Materials, 14 7513 (2021)
IF(2021) = 2.79, Q2
https://doi.org/10.3390/ma14247513

Г7-3 A Daskalova, I Bliznakova, E Iordanova, G Yankov, M Grozeva and B Ostrowska, Preliminary study of surface modification of 3D Poly (ε - caprolactone) scaffolds by ultrashort laser irradiation Journal of Physics: Conference series 682 (2016)
IF(2016) = 0.5, Q4
doi:10.1088/1742-6596/682/1/012006

Г7-4 G. Yankov, S. Karatodorov, V. Mihailov, V. Tankova, N. Nedyalkov, **E. Iordanova**, „Damage threshold in ablation regime induced by femtosecond laser irradiation on transparent media“, Comptes Rendus de l’ Academie Bulgare des Sciences (2022) Приета за печат с регистрационен номер № 321/2022 г.
IF(2022) = 0.378, Q3

Г7-5 G. Yankov, **E. Iordanova**, N. Nedyalkov, M. Zamfirescu, “Preliminary results on non-linear effects in Au-ion-doped glass materials irradiated by femtosecond laser pulses” Journal of Physics: Conference Series, 1492(1) 012060 (2020)
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Г7-6 N. Nedyalkov, M. E. Koleva, R. Nikov, N. E. Stankova, E. Iordanova, G. Yankov, L. Alexandrov, R. Iordanova, “Tuning optical properties of noble metal nanoparticle-composed glasses by laser radiation”, Applied Surface Science, 463 968-975 (2019)
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Г7-7 N. Nedyalkov, N. E. Stankova, M. E. Koleva, R. Nikov, M. Grozeva, E. Iordanova, G. Yankov, L. Aleksandrov, R. Iordanova, D. Karashanova, "Optical properties modification of gold doped glass induced by nanosecond laser radiation and annealing", Optical Materials, 75 646-653 (2018)
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Г7-9 N Nedyalkov, N E Stankova, M E Koleva, R Nikov, P. Atanasov, M Grozeva, E Iordanova, G Yankov, L Aleksandrov, R Iordanova, D Karashanova, “Optical properties modification induced by laser radiation in noble metal doped glasses”, Journal of Physics: Conference Series 992 012047 (2018)
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Г7-10 E.A.D. Carbone,1 J.M. Palomares, S. H¨ ubner, E. Iordanova J.J.A.M. van der Mullen Erratum: revision of the criterion for avoiding. electron heating during Laser Aided Plasma Diagnostics (LAPD), Journal of Instrumentation, JINST 8 E05001 (2013)
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DOI 10.1088/1748-0221/8/05/E05001

Г7-11 E Iordanova, S Hübner, E A D Carbone, J M Palomares and J J A M van der Mullen, "Central axial profiles of main gas density and temperature determined with Rayleigh scattering" Journal of Instrumentation, 7 C02032 (2012)
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Г7-12 J.M. Palomares, E. Iordanova, A. Gamero, A. Sola, J.J.A.M. van der Mullen, "Atmospheric microwave-induced plasmas in Ar/H2 mixtures studied with a combination of passive and active spectroscopic methods", Journal of Physics D: Applied Physics, 43(10) 395202 (2010)
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Г7-13 J.M. Palomares, E. Iordanova, E.M. van Veldhuizen, L. Baede, A. Gamero, A. Sola, J.J.A.M. van der Mullen, "Thomson scattering on argon surfatron plasmas at intermediate pressures: Axial profiles of the electron temperature and electron density" Spectrochimica Acta Part B: Atomic Spectroscopy, 65(3) 225-233 (2010)
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Патенти, патентни заявки

Г10 - 1

Патентна заявка с номер BG/P/2022/113628, дата 14.12.2022 г., издадена от Патентно ведомство на Република България.

Наименование на изобретението – „Метод и система за захващане, охлаждане и компресия на неутрални атоми, молекули и частици с лазерни импулси“

Заявители - Институт по електроника – БАН и Институт по физика на твърдото тяло – БАН

Изобретатели – Любомир Ковачев (ИЕ - БАН), Екатерина Йорданова (ИФТТ - БАН), Георги Янков (ИФТТ-БАН)

8.2. Списък на цитатите, с които се участва в настоящата процедура

(забелязани в научни издания, монографии, колективни томове и патенти, реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus))

N. Nedyalkov, N. E. Stankova, M. E. Koleva, R. Nikov, L. Alexandrov, R. Iordanova, E. Iordanova, G. Yankov, „Laser processing of noble metal doped glasses by femto- and nanosecond laser pulses, Applied Surface Science, 475 479-486, (2019)

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8.3. Списък на проектите

Ръководител	5
Участник в	
национални	3
международни	5
Общо	13

Ръководител на проекти - 5

1. Проект с Договор КП-06-КОСТ/13, ФНИ- МОН предоставяне на национално съфинансиране за участие на български колективи в утвърдени акции по Европейската програма за сътрудничество в областта на научните изследвания и технологии COST.
   Тема: Оптично охлаждане и ускорение на неутрални частици с фемтосекундни лазерни импулси.
   (2022 - 2023)

2. Проект с Договор N: КП-06-Н38/5 2019 г. от 06.12.2019 г., ФНИ-МОН
   Тема: Функционализация на 3D принтирани фиброзни матрици чрез фемтосекундно лазерно моделиране
   (2019 – 2023)

3. Проект с Договор - ДН08-16/14.12.2016, ФНИ-МОН
   Тема: Лазерно индуцирано формиране на тримерни структури от наночастици и изследване на техните оптични свойства; ръководител ПО ИФТТ-БАН
   (2016 - 2019)

4. Съвместни научни изследвания с Национален Институт по лазерна плазма и радиационна физика Bucharest, Румъния
   Тема: Обработка и анализ на материали със свръхкъси лазерни импулси.
   (2019 - 2021)

5. Съвместни научни изследвания с Национален Институт по лазерна плазма и радиационна физика Bucharest, Румъния
   Тема: Приложения на лазери със свръхкъси импулси за обработка и анализ на материали.
   (2015 - 2018)

Участие в научноизследователски проекти

Национални научни проекти - 3

1. Договор КП-06 ПН58/11 от 2021 г., ФНИ-МОН
   Тема: Динамика и формиране на плазма индуцирана от фемтосекундни инфрачервени лазерни импулси в прозрачна среда, (2021- 2024)

2. ННП „Отбрана и сигурност“, ДСД-1 от 07.07.2022 с ЦИНЦО-БАН
   (2022 -)

3. Договор - КП-06-Н27/5, ФНИ-МОН
   Тема: Създаване и изследване на мощна лазерна система с високо качество на снопа, генерираща в средната инфрачервена спектрална област
   (2018 – 2022)

Международни научни проекти - 5

1. КОСТ акция CA18212
   Тема: Molecular Dynamics in GAS phase
   (2019 - 2023)

2. REGPOT-2012-2013-1 NMP Research and Innovation Capacity Strengthening of ISSP-BAS in Multifunctional Nanostructures, Повишаване на научния и иновационен капацитет на ИФТТ-БАН в областта на многофункционалните наноструктури, INERA
   (2013 - 2016)

3. Physical chemistry of plasma-surface interactions, Phase VI, Interuniversity Attraction Poles" (IAP) Programme, P6/08
   (2007 - 2011)

4. Transport phenomena in high-pressure plasmas of complex chemical composition: numerical simulations and experimental validation, Nederlandse Organisatie voor Wetenschappelijk Onderzoek - NWO,
   Phillips Lighting and Draka companies,
   (2003 – 2011)

5. COST Action 529
   Тема: "Efficient Lighting for the 21st Century", (2001 - 2006)