

**ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ УЧРЕЖДЕНИЕ НАУКИ ИНСТИТУТ СИНТЕТИЧЕСКИХ ПОЛИМЕРНЫХ МАТЕРИАЛОВ ИМ.
Н.С. ЕНИКОЛОПОВА РОССИЙСКОЙ АКАДЕМИИ НАУК**

Центр исследования полимеров

Перечень публикаций, подготовленных по результатам работ, выполненных с использованием научного оборудования ЦКП за 2025 год

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1А	2	3	4	5	6	7	8	9	10	11
1	147 29	журнал	Advanced PMSSO Hydrogel Cross-Linked Cyclodextrin Composite Carrier for Enhanced Oral Delivery of Iron to Treat Anemia	10.3390/gels11120973	Kalinina Alexandra, Latipov Egor, Lakienco Grigorii, Skuredina Anna, Meshkov Ivan, Doroshenko Alexey, Frolov Vsevolod, Sharikov Sergei, Orlova Polina, Le-Deygen Irina, Muzafarov Aziz	Gels, 12, 2025	2310-2861	РИНЦ, Белый список	Iron deficiency anemia continues to pose a significant global health burden, necessitating the development of improved therapeutic delivery systems. This study investigates novel composite materials composed of organosilicon hydrogels and cross-linked sulfobutyl ether beta-cyclodextrin (SBECD) nanoparticles for the oral delivery of iron compounds. Two types of cross-linked SBECD nanoparticles were synthesized using 1,6-hexamethylene diisocyanate. These nanoparticles were characterized by DLS, NTA, and FTIR and possess size around 200-300 nm and negative zeta-potential around -35 mV with molecular weight 150-200 kDa. Various hydrogel matrices, including plain PMSSO hydrogels and modified versions with amino groups or silicate cross-links, are also described. The hydrogels were evaluated for their iron sorption capacity (up to 44% loading efficiency) and release kinetics for 3 h. The results demonstrate that cross-linked SBECD nanoparticles significantly enhance iron sorption and provide sustained release under simulated physiological conditions. Mathematical modeling indicated that the Higuchi model best describes the iron release kinetics. The findings suggest that the proposed composite materials hold considerable promise for the treatment of iron deficiency anemia, offering an innovative approach to enhance therapeutic efficacy and minimize adverse effects.	Да	20
2	147 30	журнал	Advancing gas separation performance: Plasma-treated polymer from 5-ethylidene-2-norbornene beyond the Robeson upper bound	10.1016/j.memsci.2025.125039	Nikiforov Roman, Piskarev Mikhail, Kuznetsov Alexander, Alentiev Alexandr, Gilman Alla, Ryzhikh Victoria, Skryleva Elena, Zinoviev Alexandr, Syrtsova Daria, Wozniak Alyona, Bermeshev Maxim	Journal of Membrane Science, 2026	0376-7388	РИНЦ, Белый список	Не указано	Да	9
3		журнал					1574-1451		Не указано	Да	10

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1	1A	2	3	4	5	6	7	8	9	10	11
	14731		Anti-fouling System Based on PDMS and Polyhexamethylene Guanidine for the Protection of Marine Vessels	10.1007/s10904-025-04025-7	Klokova Kseniia S, Muzafarov Aziz M, Drozdov Fedor V, Milenin Sergey A, Vu Tran D, Andropova Ulyana S, Ardabevskaia Sofia N	Journal of Inorganic and Organometallic Polymers and Materials, 2025		РИНЦ, Белый список			
4	14732	журнал	Bacteriostatic Silicone Coatings Based on Functional Resins With Guanidine and Perfluoroalkyl Functions	10.1002/app.70074	Muzafarov Aziz M, Strukova Elena N, Shkinev Petr D, Drozdov Fedor V, Chepurnova Sofia U	Journal of Applied Polymer Science, 8, 2025	1097-4628	РИНЦ, Белый список	<p><jats:title>ABSTRACT</jats:title> <jats:p> In this study, MT resins (consisting of mono- and trifunctional alkoxy silanes) containing varying amounts of perfluoroalkyl and guanidinoalkyl substituents were synthesized via hydrolytic polycondensation in an active medium. Based on these resins, silicone-based protective coatings were prepared using PDMS modified with 3-aminopropyltriethoxysilane as a cross-linking agent. This approach was used for the first time to obtain bacteriostatic coatings and has a number of advantages: low cost, scalability, and the ability to vary the functional components of the compositions over a wide range. Optimization of the coating application process demonstrated that applying the coatings from solution resulted in an 8-fold improvement in surface roughness. The resulting protective coatings were evaluated for their bacteriostatic activity against Gram-negative (</p> <p style="text-align: center;"><jats:styled-content style="fixed-case"> <jats:italic>E. coli</jats:italic> ATCC 25922,</p> <p style="text-align: center;"><jats:styled-content style="fixed-case"> <jats:italic>P. aeruginosa</jats:italic> ATCC 27853,</p> <p style="text-align: center;"><jats:styled-content style="fixed-case"> <jats:italic>P. aeruginosa</jats:italic> 58,</p> <p style="text-align: center;"><jats:styled-content style="fixed-case"> <jats:italic>P. aeruginosa</jats:italic> 60,</p> <p style="text-align: center;"><jats:styled-content style="fixed-case"> <jats:italic>K. pneumoniae</jats:italic> ATCC 700603) and Gram-positive (</p> <p style="text-align: center;"><jats:styled-content style="fixed-case"> <jats:italic>S. aureus</jats:italic> ATCC 43300, <jats:styled-content style="fixed-case"> <jats:italic>S.</p>	Да	9

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1	1A	2	3	4	5	6	7	8	9	10	11
									<p>aureus</jats:italic> </jats:styled-content> ATCC 700699, </jats:styled-content style="fixed-case"> </jats:italic>E. faecalis</jats:italic> </jats:styled-content> ATCC 29212, and the clinical strain <jats:styled-content style="fixed-case"> <jats:italic>E. faecium</jats:italic> </jats:styled-content> 3576) bacterial strains at a cell concentration of 10 <jats:sup>6</jats:sup> -10 <jats:sup>7</jats:sup> CFU/mL. Comparing perfluoroalkyl- and guanidine-containing coatings, it was shown that for coatings of this type, surface roughness plays a significant role in bacteriostatic impact. Further work in this direction will make it possible to obtain effective bacteriostatic coatings with good physical and mechanical properties, which is important for increasing durability and wear resistance. </jats:p></p>		
5	147 33	журнал	Chitosan Complexes with Gallic Acid Obtained in the Solid State	10.1134/s003683825602859	Zakharevich A A, Khavpachev M A, Malyk B V, Svischeva N B, Popyrina T N, Kurkin T S, Svidchenko E A, Ivanov P L, Akopova T A	Applied Biochemistry and Microbiology, 6, 2025	1608-3024	Белый список	Не указано	Да	10
6	147 34	журнал	Copper foam as a catalyst for azide-alkyne cycloaddition of organosilicon molecules	10.1039/d5re00219b	Aristova Vasilissa A, Ardabevskaia Sofia N, Drozdov Fedor V, Andropova Ulyana S, Milenin Sergey A, Frank Inga V, Shkinev Petr D, Klokova Ksenia S, Bezlepkina Kseniya A, Belikova Irina I	Reaction Chemistry and Engineering, 10, 2025	2058-9883	РИНЦ, Белый список	<jats:p>In our work, we demonstrate the good efficiency of raw copper foam, which can easily be purchased in online stores, for functionalization and copolymerization of organosilicon molecules and polymers.</jats:p>	Да	12
7	147 35	журнал	Design of Pervaporation Membranes Based on Blend of Linear and Highly Branched Polyimides With Terminal Amino Groups	10.1002/apr.57647	Bildyukevich A V, Soldatova A E, Plisko T V, Burts K S, Shamsutdinova R N, Tsegelskaya A Yu, Khanin D A, Monakhova K Z, Kuznetsov A A	Journal of Applied Polymer Science, 43, 2025	1097-4628	РИНЦ, Белый список	<jats:title>ABSTRACT</jats:title><jats:p>Novel polyimide (PI) membranes for pervaporation dehydration of isopropanol/water mixtures from the blends of linear PI (based on 3,4'-oxydianiline and 4,4'-(4,4'-isopropylidenediphenoxy)bis(phthalic anhydride), PI 3,4'-ODA-DA) and highly branched PI with terminal amino groups were obtained via evaporation induced phase separation method. New highly branched polyimide (HB PI) with terminal amino groups was synthesized by an original method of one-pot polycondensation in a benzoic acid melt. The structure of obtained PIs was investigated by Fourier-transform infrared (FTIR) and	Да	12

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1	1A	2	3	4	5	6	7	8	9	10	11
									<p>H NMR spectroscopies. Molecular weight characteristics of HB PI were examined via gel permeation chromatography. The effect of the concentration of HB PI with terminal amino groups on the structure and pervaporation performance of the membranes from PI 3,4'-ODA-DA was studied. Dense membranes were investigated using differential scanning calorimetry (DSC) as well as FTIR, scanning electron microscopy (SEM) and contact angle measurements. It was found that the addition of HB PI led to hydrophilization of the membrane surface and formation of a more heterogeneous loose cellular structure compared to the reference membrane structure from linear PI. Membrane performance in the separation of water/isopropanol mixtures via vacuum pervaporation was studied. It was revealed that the introduction of HB PI to the solution of linear PI, as well as an increase in its concentration, yielded a significant increase in membrane normalized flux (from 780 to 790-900 (g μm)/(m²h)), selectivity (water content in permeate rose from 71% to 78%-97%) and normalized pervaporation separation index (enhanced from 12 to 19-180 (kg μm)/(m²h)).</p>		
8	14736	журнал	Development of a Method for Blocking Polysodiumoxy(methyl)siloxane Obtained in an Alcohol Medium	10.3390/polymer17152023	Muzafarov Aziz M, Nesterkina Alina A, Obrezkova Marina A	Polymers, 15, 2025	2073-4360	РИНЦ, Белый список	<p>Polysodiumoxy(methyl)siloxane is a highly functional polymer matrix that can be used for the preparation of both functional and non-functional polymers, including molecular brushes. To determine the molecular weight parameters of the matrix, as well as its chemical structure, it is necessary to develop an effective method of blocking functional (in our case, sodiumoxy) groups due to their high reactivity. At the same time, the blocking product should represent a complete non-functionalized replica of polysodiumoxy(methyl)siloxane. Since the obtained polysodiumoxy(methyl)siloxane can contain both sodium- and hydroxy groups in its composition, the presence of both types of functional groups should be considered in the blocking process. In this work, we investigated the blocking process of polysodiumoxy(methyl)siloxane and the influence of blocking conditions on the blocked product. We carried out several variants of blocking, which differed in the order and method of introduction of reagents, as well as in the temperature regime. The chemical structure and molecular weight characteristics of the obtained polymers were analyzed by ¹H NMR spectroscopy and gel permeation chromatography (GPC),</p>	Да	3

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1	1A	2	3	4	5	6	7	8	9	10	11
									respectively. According to the blocking results, only in one case, complete non-functionalized replicas of polysodiumoxy(methyl)siloxane were obtained, which allows this technique to be used as a tool for the analysis of complex, highly functionalized organosilicon systems.</jats:p>		
9	14737	журнал	Disposable Foamed Silicone Composite Actuator Powered by Sublimation	10.3390/polym17223032	Ponomarenko Sergey, Kalinina Aleksandra, Khmel'nitskaia Alina, Bezsudnov Igor	Polymers, 22, 2025	2073-4360	РИНЦ, Белый список	<jats:p>Soft actuators are widely explored as movers in various devices, human-machine interfaces, for medical purposes and other biomedical applications. Among them are soft actuators based on a foamed silicone matrix with the working liquid (WL) captured in its pores that undergo the liquid-gas phase transition. For the first time, to gain the actuation strain of such composites, we added, to the WL, a substance that sublimates during the composite actuation. C1-C3 alcohols were tested as WLs, while the sublimation substance (SS) used was benzoic acid dissolved in the WL. It was found that the rejuvenation procedure is able to fill the composite pores with WL + SS solution. The effect of benzoic acid addition was revealed using the two-stage heating mode. The sublimation substance effectively extends the composite strain for methanol and ethanol as WL for about 20%. For C3 propanols, the strain is left nearly unchanged. In the open-air conditions, the high diffusion of WL + SS in silicone allows only a single actuation that makes it a disposable actuator, i.e., a kind of safety switch is proposed. The results obtained in this work pave the way to future, powerful multipurpose "soft safeties" appliances.</jats:p>	Да	11
10	14738	журнал	Effect of Carrier Protein Size on Hapten Immunogenicity and Antibody Affinity in Mice	10.1021/acs.bioconjchem.5c00606	Burkin Maksim A, Galvidis Inna A, Katarzchnova Elena Y, Tikhomirov Alexander S, Litvinova Valeria A	Bioconjugate Chemistry, 2025	1520-4812	РИНЦ, Белый список	Не указано	Да	8
11	14739	журнал	From Small Molecules to Polymers: Developing Non-Fullerene Acceptors for Efficient NIR Photothermal Cancer Therapy	10.3390/polym17243304	Lunosov Yuriy N, Stepanov Maxim E, Vetyugova Anastasia A, Poletavkina Liya A, Dyadishchev Ivan V, Trul Askold A, Egorova Tatyana V, Akasov Roman A, Isaeva Yulia A, Blagodarnaia Elizaveta D	Polymers, 24, 2025	2073-4360	РИНЦ, Белый список	<jats:p>Developing organic photothermal agents that are highly stable and have tunable electronic properties is important for advancing low-invasive cancer therapy. In this study, we present the synthesis and evaluation of three conjugated photothermal agents inspired by non-fullerene Y-series acceptors: the small molecule BTPT-OD, as well as two of its polymer derivatives with regular (r-BTPT) and irregular (ir-BTPT) structures. All of the compounds absorb light effectively in the red and near-infrared spectral ranges, with absorption maxima from 734 to 746 nm, and form stable nanoparticles (NPs) via nanoprecipitation, ranging in size from 13 to 39 nm. NPs exhibited negative surface charges, with	Да	15

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1	1A	2	3	4	5	6	7	8	9	10	11
									ζ-potentials of -12.9, -15.5, and -17.9 mV for BTPT-OD, r-BTPT, and ir-BTPT NPs, respectively. Irradiation at a wavelength of 730 nm revealed that r-BTPT and ir-BTPT polymer NPs exhibited a 22- to 40-fold greater phototoxicity against A-549, Sk-Br-3, and MCF-7 human carcinoma cells than the non-polymeric analogue BTPT-OD. The measured photothermal conversion efficiencies ranged from 24 to 27 ± 5%. At the same time, the intracellular ROS generation quantified by the 2',7'-dichlorodihydrofluorescein diacetate (DCFH-DA) assay was low, allowing us to propose heat-mediated photothermal therapy as a more significant cell death predictor than ROS-mediated photodynamic therapy. This work is one of the first to compare small and polymeric non-fullerene acceptor materials for phototherapy purposes, demonstrating the advantages of using polymers.		
12	14740	журнал	Fully ink-jet printed gas sensors based on organic field-effect transistors	10.1088/2058-8585/ae03d2	Kapadia Sunil, Polomoshnov Maxim, Ponomarenko Sergey, Trul Askold, Agina Elena	Flexible and Printed Electronics, 3, 2025	2058-8585	РИНЦ, Белый список	<p>Abstract</p> <p>The development of gas sensors with a low limit of detection is a challenging task, which is actual for many applications requiring complex gas mixture analysis. Application of organic field-effect transistors (OFETs) as sensing elements is very promising due to a strong dependence of their electrical parameters on the environment composition. The OFET layers of different architectures can be fabricated straight forward by ink-jet printing technology, however no fully-printed gas sensors based on OFETs have been reported yet. Here, we describe the first example of such sensors and their sensory properties towards low concentrations of various toxic gases such as nitrogen oxide, hydrogen sulfide or ammonia. Comparison with monolayer OFET sensors allowed to make some suggestions about the mechanism of their sensing. The sensors demonstrate a great potential of sensory devices based on the printed OFETs, while the sensory properties estimation shows a few issues to be solved before the widespread use of such devices.</p>	Да	10
13	14741	журнал	Functional Chitosan Films with Improved Physical-Mechanical Properties and Antibacterial Activity against Bacillus subtilis and Escherichia coli	10.1134/s0026261725602210	Goncharuk G P, Popyrina T N, Alkhair A Ya, Akopova T A, Kirsh I A, Ivanov P L, Aksenova N A	Microbiology (Russian Federation), 6, 2025	0026-2617	РИНЦ, Белый список, ВАК	Не указано	Да	8
14	14742	журнал	Functionalization of the	10.1007/s1	Trul A A, Poimanova E Yu,	Russian Chemical Bulletin, 11, 2025	1573-9171	РИНЦ, Белый список, ВАК	Не указано	Да	9

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1	1A	2	3	4	5	6	7	8	9	10	11
			poly(3,4-ethylenedioxythiophene):poly-(styrene sulfonate) active layer of the organic electrochemical transistors to create biosensors	1172-025-4832-y	Titova Ya O, Ponomarenko S A, Agina E V, Keshek A K, Karaman P N						
15	14743	журнал	Impact of alkyl chain length on the thermal, optical and semiconductor properties of the symmetric 4-alkylphenyl derivatives of [1]benzothieno[3,2- <i>b</i>]benzothiophene	10.1039/d5tc01778e	Moutsios Ioannis, Ponomarenko Sergey A, Paraschuk Dmitry Yu, Vinnik Denis A, Ivanov Dimitri A, Rosenthal Martin, Anokhin Denis V, Svidchenko Evgeniya A, Surin Nikolay M, Kuchkina Irina O, Sorokina Ekaterina A, Fedorenko Roman S, Borshchev Oleg V	Journal of Materials Chemistry C, 34, 2025	2050-7534	РИНЦ, Белый список	<jats:p>The impact of alkyl chain length on the physico-chemical and semiconducting properties of novel symmetric 4-alkylphenyl BTBT derivatives (C<jats:italic>n</jats:italic>-PBTTT) was revealed.</jats:p>	Да	9
16	15017	журнал	In-situ Organomagnesium synthesis of allyl(alkoxy)silanes from allylchloride and Methylalkoxysilanes	10.1016/j.jorganchem.2025.123838	Temnikov Maxim N, Bezlepina Kseniya A, Ardabevskaia Sofia N, Krylov Fedor D, Gubarev Valentin I, Milenin Sergey A	Journal of Organometallic Chemistry, 2025	0022-328X	РИНЦ, Белый список	Не указано	Да	14
17	15018	журнал	Investigation of Metallo(organo)siloxane —Polydimethylsiloxane Composites with a High Metallosiloxane Component Content	10.3390/polym17223034	Meshkov Ivan B, Tarasenkov Alexander N, Muzafarov Aziz M, Goncharuk Galina P, Tebeneva Nadezhda A, Buzin Mikhail I, Buzin Alexander I, Kalinina Aleksandra A	Polymers, 22, 2025	2073-4360	РИНЦ, Белый список	<jats:p>A representative series of functional branched metallosiloxane oligomers was used to obtain polydimethylsiloxane-based composites highly filled with a metallosiloxane component. Physical and mechanical characteristics of compositions obtained strongly depends on metallosiloxane structure and composition. It is shown that it is possible to regulate the strength and elastic properties of the systems under consideration within wide limits, as well as to influence the morphology of the material. The resulting materials are rather thermo-oxidatively stable and can also maintain high mobility of polydimethylsiloxane chains.</jats:p>	Да	12
18	15019	журнал	Magneto-Tunable Surface Roughness and Hydrophobicity of Magnetoactive Elastomers Based on Polymer Networks with Different Architectures	10.3390/polym17172411	Kramarenko Elena Yu, Kostrov Sergey A, Kirgizov Sobit E	Polymers, 17, 2025	2073-4360	РИНЦ, Белый список	<jats:p>In this study, we present experimental investigations of the surface structure and water contact angles of magnetoactive elastomers (MAEs), which are controlled by an external magnetic field. Specifically, we examine how the polymer matrix architecture affects the surface roughness and wettability of MAEs in various magnetic fields. We performed a comparative analysis on MAEs based on a linear polysiloxane network and on a matrix of the same chemical nature	Да	15

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1	1A	2	3	4	5	6	7	8	9	10	11
									containing side-grafted chains. We synthesized a series of magnetoactive elastomers containing 75 wt.% carbonyl iron and varying amounts of a low-molecular-weight plasticizer. Although the magnetorheological effect is higher for traditional linear MAEs, we found that the magnetic response in surface properties is higher for novel MAEs with side-grafted chains. The largest increase in water contact angle was observed in the side-chain MAEs with the highest 60 wt.% plasticizer content: rising from 112* in a zero field to 168* in a 490 mT magnetic field. Water contact angles exhibit greater stability over time for side-chain MAEs, and this stability further increases in the presence of a magnetic field. Our results demonstrate that the architecture of the polymer matrix serves as an effective tool for designing smart, magnetically responsive surfaces. </jats:p>		
19	15020	журнал	Near-infrared neural stimulation with conjugated polymer nanoparticles	10.1080/10601325.2025.2600467	Poletavkina Liya A, Isaeva Yulia A, Blagodarnaia Elizaveta D, Aseyev Nikolay A, Idzhilova Olga S, Stepanov Maxim E, Vetyugova Anastasia A, Balaban Pavel M, Ponomarenko Sergey A, Luponosov Yuriy N	Journal of Macromolecular Science - Pure and Applied Chemistry, 2025	1060-1325	Белый список	Не указано	Да	7
20	15021	журнал	Novel Organosilicon Tetramers with Dialkyl-Substituted [1]Benzo[thieno[3,2-b]benzothioophene Moieties for Solution-Processible Organic Electronics	10.3390/molecules30234639	Ponomarenko Sergey A, Zaborin Evgeniy A, Buzin Alexander I, Bakirov Artem V, Titova Yaroslava O, Borshchev Oleg V, Chvalun Sergey N, Gudkova Irina O	Molecules, 23, 2025	1420-3049	РИНЦ, Белый список	<jats:p>The synthesis, phase behavior and semiconductor properties of two novel organosilicon tetramers with dialkyl-substituted [1]benzo[thieno[3,2-b]benzothioophene (BTBT) moieties, D4-Und-BTBT-Hex and D4-Hex-BTBT-Oct, are described. The synthesis of these molecules was carried out by sequential modification of the BTBT core by carbonyl-containing functional alkyl substituents using the Friedel-Crafts reaction, followed by the reduction in the keto group. The target tetramers, D4-Und-BTBT-Hex and D4-Hex-BTBT-Oct, were obtained by the hydrosilylation reaction between tetraallylsilane and corresponding 1,1,3,3-tetramethyl-1-(ω-(7-alkyl[1]benzo[thieno[3,2-b]benzothioophen-2-yl)alkyl)disiloxanes. The chemical structure of the compounds obtained was confirmed by NMR 1H-, 13C- and 29Si-spectroscopy, gel permeation chromatography and elemental analysis. Their phase behavior was investigated by differential scanning calorimetry, polarization optical microscopy and X-ray diffraction analysis. It was found that D4-Und-BTBT-Hex shows higher crystallinity at room	Да	15

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1	1A	2	3	4	5	6	7	8	9	10	11
									temperature as compared to D4-Hex-BTBT-Oct, while both molecules possess smectic ordering favorable for active layer formation in organic field-effect transistors (OFETs). The active layers were applied by spin-coating under conditions of a homogeneous thin layer formation with a low content of defects. The devices obtained from D4-Und-BTBT-Hex have demonstrated good semiconductor characteristics in OFETs with a hole mobility up to $3.5 \times 10^{-2} \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$, a low threshold voltage and an on/off ratio up to 107.		
21	15022	журнал	PMSSO-Hydrogels as a Promising Carrier for B12 Vitamin	10.3390/jpb i2030010	Orlova Polina, Skuredina Anna, Meshkov Ivan, Muzafarov Aziz, Le-Deygen Irina, Ialama Daniil	Journal of Pharmaceutical and BioTech Industry, 3, 2025	2813-9380		<jats:p>The development of novel dosage forms of vitamin B12 is an urgent task for addressing vitamin deficiency in individuals with gastrointestinal diseases or those following stringent dietary limitations. The study illustrates the fundamental possibility of employing a non-toxic and biocompatible organosilicon hydrogel with significant sorption capacity for B12 delivery. Research indicated that 40 min of incubation suffices for optimal loading efficiency, influenced by both external diffusion and intradiffusion factors. The release of B12 in a medium that mimics the human gastrointestinal tract transpires almost entirely within a timeframe that aligns with physiological conditions. Consequently, organosilicon hydrogels serve as potential vehicles for the administration of vitamin B12.</jats:p>	Да	11
22	15023	журнал	Preparation of Concentrated PMMA Suspensions Stabilized by a Green Polysiloxane Surfactant	10.3390/polym17182535	Borisova Diana, Muzafarov Aziz, Gritskova Inessa, Bystrova Aleksandra, Kalinina Aleksandra, Borisov Kirill	Polymers, 18, 2025	2073-4360	РИНЦ, Белый список	<jats:p>This study presents an approach to stabilizing suspension particles using novel eco-friendly hyperbranched organosilicon surfactants—poly(methyl ethoxysiloxane) with poly(ethylene glycol) groups (PMEOS-PEG). The surface-active properties of PMEOS-PEG polymers at the methyl methacrylate–water interface were thoroughly investigated. We demonstrate the successful preparation of concentrated, stable aqueous suspensions of poly(methyl methacrylate) with tunable particle sizes ranging from 370 nm to 840 nm.</jats:p>	Да	11
23	15024	журнал	Structure–property correlation of amphiphilic alkylthio derivatives of carboxylic acids: From self-assembly to functional activity	10.1016/j.surf.2025.107996	Vasilieva Elmira A, Milenin Sergey A, Ardabevskaia Sofia N, Krylov Fedor D, Valeeva Farida G, Davlitova Evelina M, Nizameev Irek R, Zakharova Lucia Ya, Zagidullin Almaz A, Vasileva Leysan A	Surfaces and Interfaces, 2025	2468-0230	РИНЦ, Белый список	Не указано	Да	28
24	15025	журнал	Synthesis of Polydimethylsiloxane	10.1007/s10118-025-3457-9	Kramarenko Elena Yu, Olenich Ekaterina A, Gorodov Vadim V,	Chinese Journal of Polymer Science	1439-6203	РИНЦ, Белый список	Не указано	Да	8

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
			Ureas and Preparation of Magnetic Filaments for 3D Printing		Demchenko Nina V, Andropova Ulyana S, Bakanov Kirill K, Krupnin Artur E, Kuchkina Irina O, Kostrov Sergei A, Milenin Sergey A, Chvalun Sergey N, Zou Jun	(English Edition), 2025					
25	15026	журнал	The Effect of Sensor Response Measurement Techniques on the Sensitivity of Organic Field-Effect Transistors to NO	10.1002/ael.m.202500709	Ponomarenko Sergey A, Trul Askold A, Borshchev Oleg V, Abramov Anton A, Sosorev Andrey Yu, Dubinets Nikita O, Anisimov Daniil S, Agina Elena V	Advanced Electronic Materials, 20, 2025	2199-160X	РИНЦ, Белый список	<p><jats:title>Abstract</jats:title> <jats:p> Nitrogen dioxide sensors are important for environmental monitoring, and OFETs-based devices feature high sensitivity, low production cost and power consumption. While transient pulsed saturation measurements are the most common approach to measure the sensor response, here we systematically compare it with the periodic transfer curves measurement method in both linear and saturation regimes for C8-BTBT OFETs sensitive to NO</p> <p><jats:sub>2</jats:sub> . We show that the sensitivity strongly depends on the measurement routine, governed by competition for deep trap sites between the electrically injected holes and NO</p> <p><jats:sub>2</jats:sub> -induced doping. The transfer curves method reveals that mobility change dominates in the saturation regime, while threshold voltage shift dominates in the linear regime, confirming deep traps role as key sensing receptor sites. Pulsed measurements, especially in the linear regime, yielded the highest sensitivity ($218 \pm 18\%/ppm$) by combining low charge density with low duty cycle kinetics to maximize the initial deep trap availability. DFT calculations support preferential hole transfer from NO</p> <p><jats:sub>2</jats:sub> to the trap states. Altogether confirming that minimizing trap filling by injected charge (i.e., lower current density operation) enhances OFET sensitivity. This dependence on the measurement routine persists even for OFETs containing metalloporphyrin receptor layers. These findings provide guidelines for optimizing OFET sensor design and operation.</p>	Да	11
26	15028	журнал	Change in the Contact and Adhesion Properties of Plasma-Modified Polyketone Films Stored under Different Conditions	10.1134/s199542122470182x	Piskarev M S, Kuznetsov A A, Zinovev A V, Kechek'yan A S, Gilman A B	Polymer Science - Series D, 1, 2025	1995-4220	РИНЦ, Белый список, ВАК	Не указано	Да	80
27		журнал					1028-978X			Да	38

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
	150 29		Воздействие разряда постоянного тока на свойства и структуру поверхности пленок полифениленоксида	10.30791/1028-978x-2025-2-28-40	Gatin A K, Kuznetsov A A, Alentiev A Yu, Syrtsova D A, Senatulin B R, Skryleva E A, Gilman A B, Zinoviev A V, Piskarev M S	ПЕРСПЕКТИВНЫЕ МАТЕРИАЛЫ, 2025		РИНЦ, Белый список, ВАК	<jats:p>The effect of low-pressure direct current discharge on polyphenylene oxide films was studied. Filtered atmospheric air was used as the working gas. It was shown that plasma treatment leads to significant hydrophilization of the polymer surface during treatment at the cathode and anode. The storage of modified films in air leads to a decrease in hydrophilicity, which is more characteristic of films treated at the anode. The change in the chemical structure of plasma-modified samples was studied by X-ray photoelectron spectroscopy and the formation of a significant amount of oxygen-containing groups was shown during plasma treatment of films. The atomic content of oxygen increased to a greater extent after treatment at the anode. Using atomic force microscopy, the change in film morphology after exposure by plasma was studied and a significant increase in their roughness was established. The modified films had significantly higher selectivity of gas permeability for CO ₂ /CH ₄ , CO ₂ /N ₂ and O ₂ /N ₂ vapors without reducing the flow of CO ₂ and O ₂ relative to the initial values.</jats:p>		
28	150 30	журнал	The Effect of DC Discharge on the Properties and Surface Structure of Polyphenylene Oxide Films	10.1134/s2075113325701606	Piskarev M S, Zinoviev A V, Gilman A B, Skryleva E A, Senatulin B R, Gatin A K, Syrtsova D A, Alentiev A Yu, Kuznetsov A A	Inorganic Materials: Applied Research, 5, 2025	2075-115X	РИНЦ, Белый список, ВАК	Не указано	Да	1502
29	150 31	журнал	A universal approach to the fabrication of reusable EGOFET-based aptasensors with track-etched membranes for biorecognition layers	10.1039/d4tb02536a	Nechaev Alexander N, Agina Elena V, Zavvalova Elena G, Ponomarenko Sergey A, Kretova Elena A, Keshek Anna K, Andreev Evgeny V, Yaminsky Igor V, Akhmetova Assel I, Basmanov Dmitriy V, Aldarov Konstantin G, Prusakov Kirill A, Poimanova Elena Yu	Journal of Materials Chemistry B, 15, 2025	2050-7518	РИНЦ, Белый список	<jats:p>A proof of concept for a universal approach to reusable EGOFET-based aptasensor fabrication using polymer track-etched membranes as cheap disposable elements for biorecognition layers.</jats:p>	Да	4690

заведующий ЦКП

_____ (Городов В. В.)