

4 22844/42, 1
**RUSSIAN JOURNAL
of PHYSICAL
CHEMISTRY**

is a cover-to-cover
translation
starting with the
July 1959
issue of

**ZHURNAL
FIZICHESKOI
KHIMII**

a monthly
publication of

**The ACADEMY
of SCIENCES
of the U.S.S.R.**

The English
language version
is published by

**The CHEMICAL
SOCIETY**

with the support of

**The DEPARTMENT
of EDUCATION
and SCIENCE**

The Journal is
translated and
produced by

INFOSEARCH Ltd.

and issued in
monthly parts that
correspond to the
Russian original

SUBSCRIPTIONS:

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**The CHEMICAL
SOCIETY**
Burlington House
London W.1.

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Thermodynamic properties of aluminium antimonide V.V.Samokhval and A.A.Vecher	340 (644)	The use of the heat of fusion in statistical-thermodynamic calculations of fusion diagrams D.M.Laptev	380 (726)
Use of the electromotive force method to measure the activity of the metallic components of binary and ternary carbides V.I.Alekseev, V.I.Malkin, and V.V.Pokidyshev	341 (647)	Calculation of the activity of components in ternary systems S.E.Vaisburd, A.B.Sheinin, and T.F.Remen'	383 (731)
Thermodynamic properties of alloys of manganese with transition elements of the Fourth Period (Cr, Fe, Co, Ni) and with copper V.N.Eremenko, G.M.Lukashenko, and V.R.Sidorko	343 (652)	Short-range order and interparticle interaction in the liquid binary alloys of gallium with Group II-V elements S.P.Yatsenko and V.N.Danilin	384 (734)
Investigation of the thermodynamic properties of silver-palladium solid solutions by vapour pressure measurements V.N.Eremenko, G.M.Lukashenko, and V.L.Pritula	346 (657)	Calculation of the concentration and temperature dependence of the thermodynamic functions of mixing for binary alloys A.N.Men', Yu.N.Kurushin, M.G.Zhuravleva, and G.I.Chufarov	386 (738)
Effect of silicon, nickel, and chromium on the thermodynamic activity of carbon in austenite G.V.Shcherbedinskii and V.I.Shaidurov	347 (660)	Allowance for short-range order in the calculation of the thermodynamic properties of liquid alloys M.S.Petrushkevskii and P.V.Gel'd	387 (741)
Thermodynamic properties of zirconium-niobium alloys G.B.Fedorov, E.A.Smirnov, N.A.Makhlin, and P.I.Kalinin	349 (663)	Activities of components in arsenide melts of iron, cobalt, and nickel S.E.Vaisburd and T.F.Remen'	389 (745)
Thermodynamic properties of the melts of the ternary system silver-bismuth-antimony R.A.Vecher and V.K.Plazun	351 (667)	e-Phase in the iron-manganese system at high hydrostatic pressures T.P.Ershova, E.G.Ponyatovskii, and I.L.Aptekar'	391 (748)
Approximate calculation of the entropies and heats of fusion of some semiconductors B.T.Melekh and S.A.Semenkovich	353 (672)	Thermodynamic properties of transition metals and their compounds on the basis of hypotheses concerning their electronic structure I.F.Pryadko	395 (755)
Thermodynamic properties of bismuth selenide investigated by the e.m.f. method V.P.Vasil'ev, A.P.Somov, A.V.Nikol'skaya, and Ya.I.Gerasimov	355 (675)	The activity of silicon in ferronickel E.I.Maizel', S.E.Vaisburd, and N.I.Gran'	398 (761)
The interaction of zinc with beryllium V.A.Dubin, V.A.Lebedev, I.F.Nichkov, and S.P.Raspopin	356 (678)	Changes in specific heat, volume, and emissivity of metals during phase supercooling E.S.Filippov, N.A.Nedumov, and A.M.Samarin	399 (763)
An electromotive force study of the thermodynamics of liquid zinc-uranium alloys A.V.Volkovich, I.F.Nichkov, S.P.Raspopin, V.I.Titarenko, and V.A.Lebedev	358 (682)	Activities of silicon and titanium in molten iron, cobalt, and nickel containing chromium P.A.Cherkasov, V.V.Averin, and A.M.Samarin	401 (767)
An electromotive force study of the state of liquid lanthanum-bismuth alloys V.I.Kober, V.A.Lebedev, I.F.Nichkov, and S.P.Raspopin	360 (686)	Anomalous vaporisation during phase transitions in condensed systems Yu.A.Priselkov, A.V.Tseplyaeva, S.A.Zaitseva, G.Matern, Yu.A.Sapozhnikov, V.A.Polyakov, and V.I.Severin	404 (772)
An electromotive force study on the state of uranium in liquid uranium-bismuth solutions V.A.Lebedev, I.F.Nichkov, and S.P.Raspopin	363 (690)		

Estimation of entropies of formation for some inter-metallic compounds G.M.Lukashenko	405 (775)	The entropies of gaseous polyatomic ions at various temperatures G.A.Krestov	452 (866)
Thermodynamic properties of liquid aluminium-germanium alloys G.I.Batalin and E.A.Beloborodova	408 (781)	Equilibrium between gallium and its chlorides in the fused eutectic mixture of lithium and potassium chlorides S.P.Yatsenko, V.N.Danilin, and L.N.Volkova	455 (874)
Thermodynamics and kinetics of the synthesis of carbon-titanium carbide alloys by deposition from the gas phase V.S.Kilin, A.I.Evstyukhin, and V.S.Dergunova	410 (785)	Dependence of the equilibrium partition coefficient of the impurity on the position of the element in Mendeleev's Periodic System Sh.I.Peizulaev	457 (878)
Thermodynamic properties of solid solutions of tungsten in cobalt L.N.Larikov and O.A.Shmatko	414 (793)	The conditions governing the removal of gaseous products from a reacting porous body N.G.Samoilenko	460 (883)
BRIEF COMMUNICATIONS.		Interaction of metals with fused chlorides. I. Reduction of ferric chloride by metallic aluminium B.G.Rabovskii and V.M.Kogan	462 (889)
Calculation of evaporation rates from the results of effusion measurements Yu.A.Priselkov	416 (796)	Optimum conditions of zone purification A.N.Kirgintsev, N.A.Pyl'neva, V.D.Kudrin, and K.N.Kudrina	464 (893)
Possibility of using solid electrolytes having oxygen conduction to study the thermodynamic properties of alloys of active metals A.A.Vecher and D.V.Vecher	418 (799)	Analysis of the oxidation of metallic uranium on the basis of the temperature dependence of the reaction rate A.F.Bessonov and V.G.Vlasov	468 (900)
Measurement of rates of evaporation of refractory carbides from a free surface into a vacuum V.K.Vlasov, I.V.Golubtsov, and An.N.Nesmeyanov	420 (802)	Modification of the Raney nickel catalyst by the addition of transition metals. VIII. Electrochemical oxidation of hydrogen and catalytic hydrogenation on foraminite nickel-ruthenium alloys A.B.Fasman, A.Isabekov, and B.K.Almashev	470 (903)
Simultaneous determination of solubility and diffusion parameters of gases in metals V.M.Khokhrin and L.L.Kunin	422 (805)	Dissociation of ammonia in a silent electric discharge I.A.Semiokhin, Yu.P.Andreev, K.M.Salimova, and F.Yu.Gorvat	473 (909)
APRIL		Determination of the quantum yield of the products of the photochemical reduction of water by ferrous perchlorate G.A.Korsunovskii and Yu.S.Lebedev	476 (915)
Electronic (orbital) states of species and fundamental chemical (catalytic) steps. III. Certain oxidation processes D.N.Shigorin and V.A.Tulupov	425 (813)	Behaviour of ketone peroxides in solution. VI. Dissociation of di-(1-hydroxymethylcyclohexyl) and 1-hydroperoxymethylcyclohexyl 1-hydroxymethylcyclohexyl peroxides V.L.Antonovskii and V.A.Terent'ev	479 (920)
Arylnitrogen and aryl nitric oxide radicals in reactions of amines and thioamines with peroxides S.M.Kavun and A.L.Buchachenko	427 (818)	The reaction of <i>p</i> -benzoquinone with ferrous chloride R.M.Davydov and G.V.Fomin	481 (925)
The energy of interaction between heterocyclic compounds and zinc and cadmium sulphides L.G.Maidanovskaya, A.F.Terpugova, and V.P.Plotnikova	429 (822)	Effect of a.c. frequency on the rate of corrosion of aluminium in sulphuric acid N.D.Tomashov and N.M.Strukov	484 (931)
Changes in the activation energy for viscous flow in melts of certain metals L.I.Chesnokov	431 (826)	Kinetics of a surface reaction with a logarithmic adsorption isotherm L.I.Krishtalik	487 (935)
Kinetics of photoconductance in organic semiconductor liquids Yu.A.Kopylov	433 (830)	The effect of adsorbed water molecules on the electrical parameters of the real surface of germanium V.F.Kiselev, Yu.F.Novototskii-Vlasov, and R.V.Prudnikov	487 (937)
The application of correlation functions to the calculation of the surface characteristics of normal liquids T.I.Antonenko	436 (835)	Adsorption of hydrogen on freshly cleaved graphite O.V.Nikitina, R.Brants, and V.F.Kiselev	491 (943)
Thermal diffusion in a gas-vapour mixture. I. Theory of the method Yu.T.Mazurenko	438 (839)	Theory of the convective diffusion of salts in porous media. III. Convective diffusion of salts in porous media with allowance for the effect of "blind" pores L.B.Dvorkin	493 (948)
Kinetics of nucleation in superheated liquids E.N.Sinitsyn and V.P.Skripov	440 (844)	Theory of radial-cylindrical sorption dynamics. I. Fundamental laws V.V.Rachinskii and P.A.Inchin	497 (957)
Distribution functions in surface layers. I. Asymptotic theory of surface layers of liquids F.M.Kuni and A.I.Rusanov	443 (849)	Application of computers in the calculation of the parameters of the microporous structure of adsorbents M.M.Dubin, Yu.S.Lezin, O.Kadlec, and A.Zukal	500 (964)
Dissociative collisions of ions derived from ethylene with xenon atoms S.E.Kupriyanov and A.A.Perov	447 (857)		
Mass-spectrometric study of the evaporation of potassium hydroxide A.V.Gusarov and L.N.Gorokhov	449 (860)		

The rate dependence of the collection efficiency of aerosol particles on fibres and the possibility of separating the effective factors in the filtration process L.V.Radushkevich and V.A.Kolganov	504 (971)	Heat capacity, entropy, and enthalpy of gallium phosphide A.F.Demidenko and A.N.Zhilova	535 (1019)
Interaction of hydrogen with palladium-nickel alloys A.A.Rodina, M.A.Gurevich, N.I.Doronicheva, and L.V.Mel'nikova	507 (977)	Heterogeneous-catalytic effects in the reactions of ammonia in electric discharges. I. The glow discharge E.A.Rubtsova and E.N.Eremin	536 (1022)
BRIEF COMMUNICATIONS		Enthalpy and heat capacity of titanium carbide in the region of homogeneity in the range 1300-2500°K A.G.Turchanin and V.V.Fesenko	539 (1026)
The solubility of ammonia in alcohols, ketones, and amines A.I.Kuznetsov, G.M.Panchenkov, and T.V.Gogoleva	510 (982)	Effect of the rate of cooling on the composition of solid solutions in binary alloys based on aluminium L.M.Burov and A.A.Yakunin	540 (1028)
Adsorption of noble gases on the surface of sodium chloride and potassium chloride crystals B.G.Aristov, A.V.Kiselev, V.M.Luk'yanovich, V.I.Trofimov, and S.Shpigil'	511 (984)	Distribution of the impurity in specimens of finite length after zone recrystallisation I.A.Merzhanov and A.G.Anikin	542 (1030)
Vibrational relaxation in mixtures of benzene vapour with the inert gases Yu.A.Butylev	515 (988)	Variation of the degree of adsorption of n-hexane on NaX zeolite with gas pressure and temperature L.G.Garkavenko, O.M.Dzhigit, A.V.Kiselev, and K.N.Mikos	543 (1033)
Stability of transition metal complexes with certain macromolecular ligands V.A.Barabanov, S.L.Davydova, and N.A.Plata	516 (990)	A rapid method for the determination of desorption isotherms G.I.Fedorov, G.F.Tarasova, and R.I.Izmailov	545 (1036)
Application of the method of comparative calculation in the study of diffusion in semiconductors V.A.Pantelev and E.I.Akinkina	517 (992)	MAY	
Dependence of the proton transverse relaxation time for adsorbed hydrocarbons on the structures of crystalline aluminosilicates determined by the spin-echo method I.M.Kolesnikov, G.M.Panchenkov, and N.N.Borisenko	519 (994)	Physicochemical simulation of information and thought processes. V. Interpretation of negative entropy N.I.Kobozev	549 (1045)
Surface tension of eutectic melts of certain binary and ternary nitrate systems A.F.Eliseeva, N.P.Popovskaya, and P.I.Protsenko	520 (995)	Spectra and structure of ethyl formylmalonate V.G.Vinokurov, Z.I.Shramova, N.D.Konevskaya, and A.P.Skoldinov	553 (1052)
Adsorption of arsenic trichloride on silica gel from solution in silicon tetrachloride Yu.M.Martynov, I.I.Kurlyandskaya, and B.M.Maevskaya	521 (997)	Ultraviolet absorption spectra of monosubstituted benzene derivatives P.P.Shorygin, V.A.Petukhov, A.Kh.Khomenko, and E.A.Chernyshev	555 (1057)
The true heat capacity of rare-earth chalcogenides at low temperatures. III. The true low-temperature heat capacity, entropy, and enthalpy of neodymium telluride (Nd ₂ Te ₃) I.E.Paukov, V.V.Nogteva, and E.I.Yarembash	522 (998)	Bulk viscosity of cyclohexanol as a function of the parameters of state S.A.Khodzhaev and B.A.Belinskii	559 (1065)
Thermodynamic activities in the solid solution of cobalt(II) and iron(II) oxides at 1000°C R.Yu.Dobrovinskii, V.F.Balakirev, A.N.Men', and G.I.Chufarov	523 (1001)	Infrared spectroscopic study of interionic interactions in salts of organic sulphonic acids K.K.Kalnin'sh and B.G.Belen'kii	561 (1069)
The surface tension of liquid alkali metals L.D.Volyak and Yu.P.Os'minin	524 (1003)	Velocity of sound in liquid propene, carbon tetrafluoride, and ammonia Yu.P.Blagoi, A.E.Butko, S.A.Mikhailenko, and V.V.Yakuba	564 (1075)
The nature of the compensation effect in solid-phase radical recombination A.I.Mikhailov and Ya.S.Lebedev	526 (1005)	Velocity of sound in liquefied gases and the law of corresponding states S.A.Mikhailenko and Yu.P.Blagoi	566 (1079)
The mobilities of mercury and thallium in liquid sodium S.I.Drakin, A.M.Borisova, and T.N.Sergeeva	527 (1007)	Separation of a solid phase from solutions and the behaviour of trace impurities in heterogeneous systems. I. Method of variation of supersaturation I.V.Melikhov	569 (1085)
Polarographic study of the adsorption of certain nitrophenols on charcoal from aqueous sodium chloride solutions V.Yu.Glushchenko	529 (1010)	Directional crystallisation of aqueous solutions of potassium chloride A.N.Kirgintsev, B.M.Shavinskii, and E.D.Abramovich	572 (1092)
Activated systems [platinum complexes] and catalytic oxidation of carbon monoxide in solutions K.I.Matveev, L.N.Rachkovskaya, and N.K.Eremenko	531 (1013)	Ion exchange in binary aqueous-organic media. I. Distribution of the component of a binary solution between the phases and selectivity of ion exchange G.L.Starobinets, L.V.Novitskaya, and L.I.Sevost'yanova	575 (1098)
Diffusion in the system <i>p</i> -nitrophenol-water in the critical region Yu.V.Tsekhanskaya	532 (1014)	Liquid-vapour equilibrium in the water-formic acid-acetic acid-propionic acid system at atmospheric pressure T.M.Kushner, T.N.Lebedeva, G.I.Tatsievskaya, and L.A.Serafimov	579 (1104)
Luminescent and photochemical properties of the anils of 4,8-dihydroxy-1-naphthaldehyde M.I.Knyazhanskii, O.A.Osipov, O.T.Aasmaev, and V.N.Sheinker	533 (1017)	Equilibrium between condensed phases and a vapour in which occur association and aggregation. I. General principles N.P.Markuzin	581 (1109)

Equilibrium between condensed phases and a vapour in which occur association and aggregation. II. Use of the Clausius-Clapeyron equation to calculate heats of vaporisation of pure substances N.P.Markuzin	583 (1115)	Distribution of organic ions between a resin and concentrated electrolyte solutions B.V.Moskvichev and G.V.Samsonov	632 (1215)
The physicochemical properties of aqueous solutions of amino-acids. I. Thermodynamic properties of the system D-alanine-DL-alanine-water A.I.Chebaevskii, N.A.Smirnova, and A.G.Morachevskii	584 (1118)	Chemisorption of dyes on silicic acid gels V.V.Strelko, V.A.Kanibolotskii, and Z.Z.Vysotskii	635 (1219)
Catalytic properties of the manganese complexes of $\alpha\alpha'$ -dipyridyl in the decomposition of hydrogen peroxide A.Ya.Sychev and Ya.D.Tiginyanu	587 (1124)	Characteristic features of the kinetics of the sorption of lanthanum, neodymium, zirconium, and hafnium on KU-1 cation-exchange resin I.A.Legenchenko and S.L.Strizhenyuk	638 (1224)
The mechanism of the isomerisation of methylcyclohexenes on alumina A.A.Kubasov, I.V.Smirnova, and K.V.Topchieva	591 (1131)	Dependence of the adsorption of nitrogen on the pore diameter of adsorbents M.G.Kaganer	640 (1228)
The iodine-iodide system M.S.Sytilin	595 (1138)	Absolute values of the retention volumes and heats of adsorption of various molecules on graphitised carbon black A.V.Kiselev, I.A.Migunova, and Ya.I.Yashin	644 (1235)
Spectrophotometric investigation of the formation of π -complexes by the di- <i>p</i> -methoxyphenyl nitrogen oxide radical L.A.Kalashnikova, M.B.Neiman (deceased), and A.L.Buchachenko	598 (1144)	Spectroscopic and adsorption characteristics of the interaction of hexane, benzene, and ethyl ether with the surface of silica G.A.Galkin, A.V.Kiselev, and V.I.Lygin	647 (1240)
Interaction of metals with fused chlorides. II. Behaviour of aluminium chloride as an inhibitor in the reduction of ferric chloride with aluminium V.M.Kogan and B.G.Rabovskii	600 (1147)	Strength of electric field between two spherical droplets of an emulsion in a quasi-constant external homogeneous electric field G.M.Panchenkov and L.K.Tsabek	649 (1244)
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Effect of metal oxides on the radiolysis of potassium and sodium nitrates Yu.A.Zakharov and V.A.Nevostuev	604 (1156)	Surface tension of perfluoroalkanes V.P.Skripov and V.V.Firsov	653 (1253)
Mechanism of the photoactivated formation of silver nuclei in silver bromide microcrystals E.A.Galashin	607 (1161)	Effect of desulphonation on the properties of sulphonated styrene ion-exchange resins V.S.Soldatov, A.I.Pokrovskaya, and L.I.Tsukurova	656 (1258)
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Kinetics of the anodic dissolution of copper at a rotating electrode in the presence of perchlorate anions in copper sulphate solutions N.I.Gusev and P.V.Rakcheev	612 (1172)	BRIEF COMMUNICATIONS	
Polarographic reduction of quinones of the triptycene series in dimethylformamide E.I.Klabunovskii, R.Yu.Mamedzade-Alieva, and A.A.Balandin (deceased)	615 (1177)	Separation of isotopes of nitrogen, oxygen, and argon by low-temperature sorption on zeolites A.M.Tolmachev, T.V.Zotova, and L.N.Grishina	659 (1263)
Distribution of iodine in the system RI(AV-17 anion-exchange resin)-potassium iodide-iodine-water A.I.Vulikh, E.G.Dubinina, and V.L.Bogatyrev	618 (1184)	The catalytic oxidation of ammonia in non-aqueous solution. IV. Magnetic susceptibility and activity of catalysts S.I.Papko	659 (1264)
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Adsorption of gaseous mixtures on isoelectronic analogues of germanium I.A.Kirovskaya, L.G.Maidanovskaya, and N.V.Solov'eva	624 (1196)	Interaction of hydrogen with palladium of varying degrees of purity A.A.Rodina, M.A.Gurevich, G.F.Ivanovskii, T.N.Zagorskaya, and N.I.Doronicheva	662 (1269)
Molecular-statistical calculation of the retention volumes of lower straight-chain alkanes on graphite D.P.Poshkus and A.Ya.Afreimovich	626 (1201)	Determination of the heats of formation of the hexabromotellurates of potassium, rubidium, and caesium B.D.Stepin, V.E.Plyushchev, N.M.Selivanova, and G.M.Serebrennikova	664 (1271)
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Effect of degree of dehydration of silica gel on mechanism of hydrolysis of adsorbed titanium tetrachloride S.I.Kol'tsov and V.B.Aleskovskii	630 (1210)	Kinetics and thermodynamics of the recombination and disproportionation of alkyl radicals A.D.Stepukhovich, V.A.Ulitskii, and A.P.Sharaevskii	667 (1276)
		Impurity conductance of dichlorophthalocyanosilane I.Ya.Larionova, Yu.Kh.Shaulov, and A.A.Solov'ev	669 (1279)
		Influence of various factors on the efficiency of the chemical action of the electric discharge in the cracking of methane. I. Influence of state of electrodes G.I.Meshkova and E.N.Eremin	670 (1281)
		Role of intensity of stirring in zone melting N.V.Avramenko, G.M.Dugacheva, and A.G.Anikin	673 (1284)

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Volume properties of binary gaseous solutions close to the critical pressures and temperatures of the pure components N.E.Khazanova and E.E.Sominskaya	676 (1289)	Liquid-vapour equilibria in certain systems formed by trichlorosilane and silicon tetrachloride I.I.Lapidus and L.A.Nisel'son	733 (1406)
Determination of the concentration of non-stoichiometric titanium in higher oxides by electron spin resonance M.P.Votinov and V.S.Klubnikin	678 (1292)	Equilibrium between condensed phases and a vapour in which occur association and aggregation. III. Changes in the true composition of the vapour of one-component two-phase systems with temperature and pressure N.P.Markuzin	735 (1410)
Combustion products near the lower detonation limit of acetylene A.I.El'natanov and I.I.Strizhevskii	679 (1294)	Equilibrium between condensed phases and a vapour in which occur association and aggregation. IV. Variation of the true composition of the vapour of two-component two-phase systems when the pressure is varied isothermally N.P.Markuzin	738 (1415)
[Catalytic] activity of nascent platinum black for hydrogenations A.N.Mal'tsev, N.I.Kobozev, and E.M.Bikbulatova	681 (1297)	Electrical and optical properties of BiI ₃ single crystals D.P.Belotskii, V.B.Timofeev, I.N.Antipov, V.I.Vashchenko, and V.A.Bespal'chenko	740 (1421)
Role of ozone in the redistribution of oxygen isotopes between carbon dioxide and its dissociation products in the silent electric discharge V.A.Sirotkina and I.A.Semiokhin	683 (1300)	Effect of the component ratio on the rate of combustion of condensed mixtures. III. Effect of composition on the pressure dependence of the rate of burning S.A.Tsyganov and N.N.Bakhman	744 (1428)
Low-temperature heat capacity, enthalpy, and entropy of germanium disulphide and germanium diselenide V.V.Tarasov, V.M.Zhdanov, and A.K.Mal'tsev	685 (1305)	The mechanism of the reactions of peroxides with aromatic amines B.G.Pobedimskii, A.L.Buchachenko, and M.B.Neiman (deceased)	748 (1436)
Free energy of ϵ -modification of pure iron T.P.Ershova	687 (1307)	Evaluation of the energy yield of chemical reactions initiated by ultrasonic waves. I. Chemico-acoustic yield of the reaction M.A.Margulis and A.N.Mal'tsev	751 (1441)
JUNE		Evaluation of the energy yield of chemical reactions initiated by ultrasonic waves. II. Initial chemico-acoustic yields of the ultrasonic decomposition products of water M.A.Margulis and A.N.Mal'tsev	754 (1447)
The "memory effect" in semiconductors during photo-adsorption F.F.Vol'kenshtein and V.G.Baru	689 (1317)	Theory of the convective diffusion of salts in porous media. V. Theory of elutive chromatography in finite sorbing media L.B.Dvorkin	757 (1452)
Catalytic properties of organic semiconductors S.Z.Roginskii and M.M.Sakharov	696 (1331)	Steady-state ion-exchange processes. I. Extraction from solution of the more strongly sorbed component V.I.Gorshkov and M.S.Safonov	760 (1459)
The level matching effect and catalysis Yu.S.Mardashev and A.P.Mishchenko	704 (1346)	Steady-state ion-exchange processes. II. Extraction of the more strongly sorbed component from the resin V.I.Gorshkov and M.S.Safonov	763 (1466)
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