

Евгений Генрихович Понятовский



(11.04.1930-14.01.2021)

Евгений Генрихович запомнится нам как доброжелательный и творческий человек, обогативший мировую науку целым рядом открытий, таких, как критическая точка в кристаллических веществах, спонтанная аморфизация фаз высокого давления, сверхпластичность титановых сплавов, легированных водородом высоких давлений.

Е.Г. Понятовский – один из первых сотрудников Института физики твердого тела АН СССР (РАН), профессор, доктор физико-математических наук, лауреат премии Совета Министров СССР. В 1965 году он создал в ИФТТ лабораторию физики высоких давлений, заведовал ЛФВД до 2003 года, а затем был в ней главным научным сотрудником. Под его руководством лаборатория стала одним из лучших российских научных центров, работающих в области физики высоких давлений.

Евгений Генрихович – выпускник физико-химического факультета МИСиС (1954). До прихода в ИФТТ он был сотрудником Института кристаллографии РАН (до 1959), а затем ЦНИИЧерМет. Его ранние работы посвящены фазовым диаграммам металлов при высоких давлениях (кандидатская диссертация «Исследование полиморфных превращений висмута, таллия и церия при сверхвысоких давлениях», 1961; докторская диссертация «Влияние всестороннего давления на фазовые равновесия в некоторых двухкомпонентных металлических системах и в церии, 1968). Из исследований тех лет особый интерес представляют работы по церию, приведшие к открытию критической точки типа «жидкость-пар» на линии превращения между кристаллическими фазами, что до этого считалось теоретически невозможным.

Другое открытие Евгения Генриховича, сделанное уже в ИФТТ и получившее широкую известность – это обнаружение спонтанной твердофазной аморфизации кристаллических фаз высокого давления в процессе их отогрева при атмосферном давлении. Это открытие инициировало проведение большого цикла работ, в результате которых удалось выявить несколько новых особенностей метастабильных фазовых превращений. В частности, было установлено, что кривую плавления нельзя неограниченно экстраполировать в сторону низких температур, так как при некоторой конечной температуре она обрывается в точке особого типа из-за полной потери термодинамической устойчивости жидкой фазы.

Важное практическое применение нашло еще одно открытие Е.Г. Понятовского – обнаружение сверхпластичности у титана и его промышленных сплавов, легированных водородом в определенной пропорции. До работ Евгения Генриховича водород считался вредной примесью в титане, приводящей к его охрупчиванию, и потому между циклами прокатки и другой механической обработки водород тщательно удаляли из металла путем высокотемпературного вакуумного отжига.

Совместно с еще одним талантливым сотрудником лаборатории, Игнатом Тимофеевичем Белашом, Е.Г. Понятовский изобрел оригинальный способ сжатия газообразного водорода в макроскопических объемах (от 0.1 до 1 см³) до давлений в несколько десятков тысяч атмосфер при температурах до нескольких сотен Кельвинов. В сочетании с развитым ими же методом закалки сжатых образцов до температуры жидкого азота, позволяющим сохранять и исследовать эти образцы при атмосферном давлении, это открыло новое научное направление – физика гидридов высокого давления, ставшее магистральным в работе ЛФВД на многие годы и принесшее ей мировую известность.

Большое спасибо Владимиру Евгеньевичу Антонову за помощь в подготовке этого текста

Обзоры и монография

1. PONYATOVSKII, EG; ANTONOV, VE; BELASH, IT.
PROPERTIES OF HIGH-PRESSURE PHASES IN METAL-HYDROGEN SYSTEMS
USPEKHI FIZICHESKIKH NAUK 137(4), 663-705 (1982) [PHYSICS-USPEKHI 25 596–619 (1982)]
2. PONYATOVSKY, EG; BARKALOV, OI.
PRESSURE-INDUCED AMORPHOUS PHASES
MATERIALS SCIENCE REPORTS 8(4), 147-191 (1992)
3. TONKOV, E. YU.; PONYATOVSKY, E. G.
PHASE TRANSFORMATIONS OF ELEMENTS UNDER HIGH PRESSURE (ADVANCES IN METALLIC ALLOYS SERIES), CRC PRESS: BOCA RATON, FLORIDA, 2004

Избранные оригинальные статьи

1. BUTUZOV, V.P.; PONYATOVSKI, E.G..
MELTING POINT OF INDIUM AT PRESSURES UP TO 30 000 KG/CM²
KRISTALLOGRAFIYA 1(6), 736 (1956)
2. BUTUZOV, VP; PONIATOVSKY, EG; SHAKHOVSKOY, GP.
MELTING TEMPERATURE OF ZINC, CADMIUM, THALLIUM AND ANTIMONY AT PRESSURES OF UP TO 30000 KG CM²
DOKLADY AKADEMII NAUK SSSR 109(3), 519 (1956)
3. PONIATOVSKY, EG.
THE CRITICAL POINT OF THE CURVE OF A POLYMORPHOUS CERIUM TRANSFORMATION
DOKLADY AKADEMII NAUK SSSR 120(5), 1021 (1958)
4. PONYATOVSKII, E.G..
P - T DIAGRAMS OF THALLIUM
KRISTALLOGRAFIYA 4(2), 257 (1959)
5. PONYATOVSKII, E.G..
THE P-T DIAGRAM OF BISMUTH AT PRESSURES OF UP TO 30 000 KG/CM²
KRISTALLOGRAFIYA 5(1), 154 (1960)
6. SHAKHOVSKOI, G.P.; PONYATOVSKII, E.G..
THE USE OF VARIOUS MATERIALS FOR TRANSMITTING PRESSURE
PRIBORYITEKHNIKA EKSPERIMENTA (3), 177 (1961)
7. PONYATOVSKII, EG; PERESADA, GI.
PHASE TRANSFORMATIONS OF INDIUM ANTIMONIDE AT HIGH QUASIHIDROSTATIC PRESSURES
DOKLADY AKADEMII NAUK SSSR 144(1), 129 (1962)

8. ERSHOVA, TP; PONIATOVSKY, EG.
INFLUENCE OF PRESSURE ON PHASE EQUILIBRIUM OF GRAPHITE - CEMENTITE IN IRON - CARBON SYSTEM
DOKLADY AKADEMII NAUK SSSR 151(6), 1364 (1963)
9. ZAKHAROV, AI; KADOMTSEVA, AM; LEVITIN, RZ; PONYATOVSKII, EG.
MAGNETIC AND MAGNETOELASTIC PROPERTIES OF A METAMAGNETIC IRON-RHODIUM ALLOY
SOVIET PHYSICS JETP-USSR 19(6), 1348 (1964)
10. ERSHOVA, T.P.; PONYATOVSKII, E.G..
THE EFFECT OF HIGH PRESSURES UPON THE PHASE BOUNDARIES IN THE EUTECTOID PART OF THE EQUILIBRIUM DIAGRAM OF THE IRON-CARBON SYSTEM
FIZIKAMETALLOVIMETALLOVEDENIE 17(4), 584 (1964)
11. PONYATOVSKII, EG.
T-C-P PHASE EQUILIBRIUM DIAGRAM OF BISMUTH-TIN ALLOYS
DOKLADY AKADEMII NAUK SSSR 159(6), 1342 (1964)
12. LITVIN, D.F.; PONYATOVSKII, E.G..
AN APPARATUS FOR NEUTRON DIFFRACTOMETRY OF SPECIMENS UNDER HIGH HYDROSTATIC PRESSURE
KRISTALLOGRAFIYA 11(2), 354 (1966)
13. PONYATOVSKII, EG; KUTSAR, AR; DUBOVKA, GT.
POSSIBILITY OF EXISTENCE OF A SINGULAR TRIPLE POINT ON PRESSURE-TEMPERATURE DIAGRAM OF AN IRON-RHODIUM ALLOY
SOVIET PHYSICS CRYSTALLOGRAPHY, USSR 12(1), 63 (1967)
14. PONYATOV.EG; RABINKIN, AG.
SUPERCONDUCTIVITY OF NI-SN ALLOY UNDER HIGH PRESSURE
JETP LETTERS-USSR 6(1), 10 (1967)
15. APTEKAR', I.L.; PONYATOVSKII, E.G..
THEORY OF THE ISOMORPHISM OF CERII. P-T PHASE EQUILIBRIUM DIAGRAM
FIZIKA METALLOV I METALLOVEDENIE 25(5), 777 (1968)
16. APTEKAR', I.L.; PONYATOVSKII, E.G..
THEORY OF THE ISOMORPHISM OF CERIUM. II. SINGULARITIES OF CERTAIN PHYSICAL PROPERTIES OF ISOMORPHIC PHASES OF CERIUM
FIZIKAMETALLOVIMETALLOVEDENIE 25(6), 1049 (1968)
17. PONYATOVSKII, E.G.; RABIN'KIN, A.G..
EFFECT OF HIGH PRESSURES ON THE CONSTITUTION DIAGRAM AND SUPERCONDUCTING PROPERTIES OF ALLOYS BI-PB
FIZIKAMETALLOVIMETALLOVEDENIE 30(3), 606 (1970)
18. BULYCHEV, D.K.; GEORIEVA, I.YA.; MAKSIMOVA, O.P.; PEGUSHINA, G.A.; PONYATOVSKII, E.G.; RODIONOV, K.P..
RELATIONSHIP BETWEEN THE METASTABLE PHASE DIAGRAM, CONSTITUTION AND PROPERTIES OF HYDROSTATICALLY EXTRUDED MANGANESE ALLOYS
FIZIKAMETALLOVIMETALLOVEDENIE 32(6), 1260 (1971)
19. BOIKO, A.A.; DEGTYAREVA, V.F.; PONYATOVSKII, E.G.; RABIN'KIN, A.G..
STRUCTURE OF THE ALLOY BISM UNDER HIGH PRESSURE
SOVIET PHYSICS - SOLID STATE 14(5), 1272 (1972)
20. DUBOVKA, GT; PONYATOV.EG.
CARBON DIFFUSION IN ZIRCONIUM NITRIDE
FIZIKA METALLOV I METALLOVEDENIE 33(3), 640 (1972)
21. POLOVOV, V.M.; PONYATOVSKII, E.G..
ON THE THERMODYNAMICS OF FACE-CENTRED TETRAGONAL AND FACE-CENTERED CUBIC TRANSITIONS IN INDIUM ALLOYS
SOVIET PHYSICS - JETP 37(3), 476 (1973)
22. BELASH, I.T.; PONYATOVSKII, E.G..
PHASE DIAGRAM OF CDSBSEMICONDUCTIVE COMPOUND TO 80 KBAR
HIGH TEMPERATURES - HIGH PRESSURES 6(2), 241 (1974)

23. PONYATOVSKII, EG; BELASH, IT.
PRODUCTION AND PHYSICO-CHEMICAL PROPERTIES OF MANGANESE HYDRIDE
DOKLADY AKADEMII NAUK SSSR 224(3), 607 (1975)
24. DUBOVKA, GT; PONYATOVSKII, EG; GEORGIEVA, IY; ANTONOV, VE.
SOME PECULIARITIES OF T-P-C DIAGRAM OF SYSTEM FE65(NI1-XMNX)35
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 32(1), 301 (1975)
25. DEGTYAREVA, VF; PONYATOVSKII, EG.
STUDY OF CRYSTAL-STRUCTURE OF BI - IN ALLOYS AFTER ACTION OF HIGH-PRESSURE
FIZIKA TVERDOGO TELA 17(8), 2413 (1975)
26. DEGTYAREVA, VF; PONYATOVSKII, EG; RASTORGUEV, LN.
STUDY OF STRUCTURE OF BI-PB ALLOYS EXPOSED TO ACTION OF HIGH-PRESSURE
FIZIKA TVERDOGO TELA 17(2), 439 (1975)
27. BELASH, I.T.; PONYATOVSKII, E.G..
PHASE TRANSFORMATION IN THE ZN-SB SYSTEM AT PRESSURES UP TO 90 KBAR
HIGH TEMPERATURES - HIGH PRESSURES 7(5), 523 (1975)
28. ANTONOV, VE; DUBOVKA, GT; PONYATOVSKII, EG.
EFFECT OF PRESSURE ON CURIE POINTS OF FE-NI-CU AND FE-NI-MN ALLOYS
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 27(1), K21 (1975)
29. PONIATOVSKII, EG; BELASH, IT.
FORMATION AND DECOMPOSITION OF CHROMIUM HYDRIDE AT TEMPERATURES UP TO
400DEGREESC AND HYDROGEN PRESSURES UP TO 20 KBARS
DOKLADY AKADEMII NAUK SSSR 229(5), 1171 (1976)
30. PONIATOVSKII, EG; ANTONOV, VE; BELASH, IT.
T-P PHASE-DIAGRAM OF NI-H SYSTEM AT TEMPERATURES UP TO 630DEGREESC AND PRESSURES
UP TO 18 KBARS
DOKLADY AKADEMII NAUK SSSR 229(2), 391 (1976)
31. PONIATOVSKII, EG; ANTONOV, VE; BELASH, IT.
CRITICAL PHENOMENA IN SYSTEM NI-FE-H UNDER HIGH HYDROGEN PRESSURES
DOKLADY AKADEMII NAUK SSSR 230(3), 649 (1976)
32. PONYATOVSKII, EG; ANTONOV, VE; BALASH, IP.
EFFECT OF HYDROGEN PRESSURE TO 20 KBAR ON CURIE POINTS OF FE-NI ALLOYS OF INVAR
REGION
FIZIKA TVERDOGO TELA 18(12), 3661 (1976)
33. PERESADA, GI; PONYATOVSKII, EG; SOKOLOVSKAYA, ZD.
PRESSURE-DEPENDENCE OF ELASTIC-CONSTANTS OF PBS
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 35(2), K177 (1976)
34. DEGTYAREVA, V.F.; PONYATOVSKII, E.G..
STUDY OF THE CRYSTAL STRUCTURE OF BI-IN ALLOYS AFTER THE APPLICATION OF HIGH PRESSURE
SOVIET PHYSICS - SOLID STATE 17(8), 1593 (1976)
35. DEGTYAREVA, V.F.; PONYATOVSKII, E.G.; RASTORGUEV, L.N..
INVESTIGATION OF THE STRUCTURE OF BI-PB ALLOYS SUBJECTED TO HIGH PRESSURES
SOVIET PHYSICS - SOLID STATE 17(2), 274 (1976)
36. BELASH, IT; ANTONOV, VE; PONIATOVSKII, EG.
OBTAINING OF MOLYBDENUM HYDRIDE UNDER HYDROGEN HIGH-PRESSURE
DOKLADY AKADEMII NAUK SSSR 235(2), 379 (1977)
37. BELASH, IT; ANTONOV, VE; PONIATOVSKII, EG.
SYSTEM CO-H UNDER HYDROGEN HIGH-PRESSURE
DOKLADY AKADEMII NAUK SSSR 235(1), 128 (1977)
38. ANTONOV, VE; BELASH, IT; PONIATOVSKII, EG.
T-P PHASE-DIAGRAMS OF SYSTEMS NI-D AND NI-H AT TEMPERATURES UP TO 375DEGREESC AND
PRESSURES UP TO 20-KBARS
DOKLADY AKADEMII NAUK SSSR 233(6), 1114 (1977)
39. PONYATOVSKII, E.G.; ANTONOV, V.E.; BELASH, I.T..
INFLUENCE OF HYDROGEN PRESSURE OF UP TO 23 KBAR ON THE TEMPERATURE OF THE

- ALPHARARRGAMMA TRANSFORMATION IN IRON-NICKEL ALLOYS
FIZIKAMETALLOVIMETALLOVEDENIE 44(5), 1038 (1977)
40. BELASH, IT; PERESADA, GI; PONYATOVSKII, EG.
PHYSICOCHEMICAL REACTIONS IN CU₂O AT HIGH-PRESSURES
INORGANIC MATERIALS 13(4), 544 (1977)
41. BASHKIN, IO; PONYATOVSKII, EG; KOST, ME.
PHASE-TRANSFORMATIONS IN HYDRIDES OF RARE-EARTH-METALS UNDER PRESSURE .1.
STRUCTURAL TRANSITION IN NDH₂.82
PHYSICA STATUS SOLIDI B-BASIC RESEARCH 83(2), 517 (1977)
42. TISSEN, VG; ANTONOV, VE; BELASH, IT; PONOMAREV, BK; PONIATOVSKII, EG.
MAGNETIZATION OF NI .2. SOLID-SOLUTIONS
DOKLADY AKADEMII NAUK SSSR 242(6), 1390 (1978)
43. ANTONOV, VE; BELASH, IT; DEGTYAREVA, VF; PONIATOVSKII, EG.
PRODUCTION OF RHODIUM HYDRIDE UNDER HYDROGEN HIGH-PRESSURE
DOKLADY AKADEMII NAUK SSSR 239(2), 342 (1978)
44. THIessen, VG; ANTONOV, VE; BELASH, IT; PONOMAREV, BK; PONYATOVSKII, EG.
MAGNETIZATION OF CO-H SOLID-SOLUTIONS
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 48(2), K185 (1978)
45. PONYATOVSKII, EG; ANTONOV, VE; BELASH, IT.
TRANSITION-METALS OF GROUPS-VI-VIII UNDER HIGH-PRESSURES OF HYDROGEN
INORGANIC MATERIALS 14(9), 1227 (1978)
46. PONYATOVSKII, E.G.; ANTONOV, V.E.; BELASH, I.T..
INFLUENCE OF HYDROGEN PRESSURE UP TO 23 KBAR ON THE TEMPERATURE OF THE
EPSILONRARRGAMMA TRANSFORMATION IN THE ALLOY FE+22% MN
FIZIKAMETALLOVIMETALLOVEDENIE 46(5), 1090 (1978)
47. FEDOTOV, VK; BONDARCHUK, LF; ZHEBELEV, VP; PONYATOVSKII, EG.
HIGH-PRESSURE CHAMBER UP TO 30-KBAR FOR NEUTRON-DIFFRACTION RESEARCH
INSTRUMENTS AND EXPERIMENTAL TECHNIQUES 21(4), 1096 (1978)
48. FEDOTOV, V.K.; PONYATOVSKII, E.G.; SOMENKOV, V.A.; SHIL'SHTEIN, S.SH..
NEUTRON-DIFFRACTION INVESTIGATION OF THE POLYMORPHISM OF BISMUTH AT PRESSURES UP
TO 30 KBAR
SOVIET PHYSICS - SOLID STATE 20(4), 628 (1978)
49. BELASH, I.T.; PONOMAREV, B.K.; TISSEN, V.G.; AFONIKOVA, N.S.; SHEKHTMAN, V.SH.;
PONYATOVSKII, E.G..
FERROMAGNETISM IN MN-H AND MN-D SYSTEMS
SOVIET PHYSICS - SOLID STATE 20(2), 244 (1978)
50. DEGTYAREVA, VF; IVAKHNENKO, SA; PONYATOVSKII, EG; RASHUPKIN, VI.
CRYSTALLINE-STRUCTURE AND SUPERCONDUCTIVITY OF PB-SB ALLOYS AFTER ACTION OF HIGH-
PRESSURE
FIZIKA TVERDOGO TELA 20(2), 412 (1978)
51. BASHKIN, IO; PONYATOVSKII, EG; KOST, ME.
PHASE-TRANSFORMATIONS IN HYDRIDES OF RARE-EARTH-METALS UNDER PRESSURE .2. SC-H
AND YB-H SYSTEMS UNDER HIGH HYDROGEN PRESSURE
PHYSICA STATUS SOLIDI B-BASIC RESEARCH 87(1), 369 (1978)
52. BASHKIN, IO; PONYATOVSKII, EG; KOST, ME.
P-T DIAGRAM OF THE SYSTEM SC-H AT HIGH HYDROGEN PRESSURES
INORGANIC MATERIALS 14(9), 1260 (1978)
53. ANTONOV, V.E.; BELASH, B.K.; PONOMAREV, B.K.; PONYATOVSKII, E.G.; TISSEN, V.G..
FERROMAGNETISM OF HYDRIDES OF NONFERROMAGNETIC IRON-NICKEL-MANGANESE ALLOYS
SOVIET PHYSICS - SOLID STATE 20(2), 242 (1978)
54. ANTONOV, V.E.; BELASH, I.T.; DEGTYAREVA, V.F.; PONOMAREV, B.K.; PONYATOVSKII, E.G.; TISSEN,
V.G..
MAGNETIC PROPERTIES OF SOLUTIONS OF HYDROGEN IN NICKEL-IRON ALLOYS
SOVIET PHYSICS - SOLID STATE 20(9), 1548 (1978)

55. ZHEBELEV, VP; SOMENKOV, VA; PONYATOVSKII, EG; SHILSHTEIN, SS; BELASH, IT.
STRUCTURE OF NI AND MN DEUTERIDES SYNTHESIZED AT HIGH-PRESSURES
INORGANIC MATERIALS 14(9), 1264 (1978)
56. SPITSYN, VI; PONIATOVSKII, EG; ANTONOV, VE; BELASH, IT; BALAKHOVSKII, OA.
PHASE-TRANSFORMATIONS IN THE TC-H SYSTEM UNDER HIGH-PRESSURE
DOKLADY AKADEMII NAUK SSSR 247(6), 1420 (1979)
57. ANTONOV, VE; BELASH, IT; KOLTYGIN, VM; PONIATOVSKII, EG.
T-P PHASE-DIAGRAM OF THE RH-H SYSTEM AT TEMPERATURES UP TO 400-DEGREES-C AND
PRESSURES UP TO 67-KBAR
DOKLADY AKADEMII NAUK SSSR 248(1), 131 (1979)
58. ANTONOV, VE; BELASH, IT; PONIATOVSKII, EG.
T-P PHASE-DIAGRAM OF THE MO-H SYSTEM AT TEMPERATURES UP TO 500-DEGREES-C AND
PRESSURES UP TO 50 KBAR
DOKLADY AKADEMII NAUK SSSR 248(3), 635 (1979)
59. DEGTYAREVA, V.F.; IVAKHNENKO, S.A.; PONYATOVSKII, E.G.; RASHCHUPKIN, V.I..
CRYSTAL STRUCTURE AND SUPERCONDUCTIVITY OF SN-BI ALLOYS AFTER APPLICATION OF HIGH
PRESSURES
SOVIET PHYSICS - SOLID STATE 21(3), 440 (1979)
60. DEGTYAREVA, V.F.; IVAKHNENKO, S.A.; PONYATOVSKII, E.G..
FORMATION OF NEW INTERMEDIATE PHASES IN IN-SB ALLOYS UNDER HIGH PRESSURES
SOVIET PHYSICS - SOLID STATE 21(10), 1823 (1979)
61. BASHKIN, IO; PONYATOVSKII, EG; KOST, ME.
POSSIBILITY OF HYDROGEN ORDERING IN RARE-EARTH HYDRIDES
PHYSICA STATUS SOLIDI B-BASIC RESEARCH 91(2), 401 (1979)
62. ANTONOV, VE; BELASH, IT; PONOMAREV, BK; PONYATOVSKII, EG; THIESSEN, VG.
MAGNETIC-PROPERTIES OF HYDROGEN SOLID-SOLUTIONS IN FE-NI-MN ALLOYS
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 52(2), 703 (1979)
63. ANTONOV, V.E.; BELASH, I.T.; PONYATOVSKII, E.G.; RASHUNKIN, V.I..
ON THE SUPERCONDUCTIVITY OF H SOLID SOLUTIONS IN PD-CU(AG)(AU) ALLOYS
PIS'MA V ZHURNALEKSPERIMENTAL'NOIITEORETICHESKOIFIZIKI 31(8), 451 (1980)
64. ANTONOV, VE; BELASH, IT; PONOMAREV, BK; PONYATOVSKII, EG; THIESSEN, VG.
MAGNETIC-PROPERTIES OF NI-CO-H SOLID-SOLUTIONS
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 57(1), 75-80 (1980)
65. DMITRIEV, VS; BELASH, IT; SMIRNOV, VA; PONYATOVSKII, EG.
SOLID-PHASE TRANSITIONS IN INDIUM IODIDES AT HIGH-PRESSURES
INORGANIC MATERIALS 16(3), 268-271 (1980)
66. BASHKIN, IO; DYMOVA, TN; PONYATOVSKII, EG.
ON THE STRUCTURAL TRANSITION FROM NA CL TO CSCL TYPE IN ALKALI HYDRIDES
PHYSICA STATUS SOLIDI B-BASIC RESEARCH 100(1), 87-92 (1980)
67. YURICHEV, IA; PONYATOVSKII, EG.
ISOMORPHIC TRANSITIONS AND CRITICAL PHENOMENA IN FCC METALS UNDER HYDROGEN
PRESSURE .2. CALCULATION OF THE PHASE-DIAGRAMS AND THERMODYNAMIC PROPERTIES OF
THE PD-H AND NI-H SYSTEMS
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 58(1), 57-66 (1980)
68. ANTONOV, VE; BELASH, IT; PONYATOVSKII, EG; RASHUPKIN, VI.
SUPERCONDUCTIVITY OF SOLID HYDROGEN SOLUTIONS IN PALLADIUM ALLOYS WITH NOBLE-
METALS
JETP LETTERS 31(8), 422-424 (1980)
69. ANTONOV, VE; BELASH, IT; DEGTYAREVA, VF; PONIATOVSKII, EG; SHIRIAEV, VI.
SYNTHESIS OF IRON HYDRIDE UNDER HIGH HYDROGEN PRESSURE
DOKLADY AKADEMII NAUK SSSR 252(6), 1384-1387 (1980)
70. DEGTYAREVA, V.F.; IVAKHNENKO, S.A.; PONYATOVSKII, E.G.; RASHCHUPKIN, V.I..
CRYSTAL STRUCTURE AND SUPERCONDUCTIVITY OF INDIUM-RICH IN-BI AND IN-SB ALLOYS AFTER

- HIGH-PRESSURE TREATMENT
SOVIET PHYSICS - SOLID STATE 23(6), 951 (1981)
71. SPITSYN, VI; ANTONOV, VE; BALAKHOVSKII, OA; BELASH, IT; PONIATOVSKII, EG; RASHCHUPKIN, VI; SHEKHTMAN, VS.
STRUCTURE AND SUPERCONDUCTING PROPERTIES OF HIGH-PRESSURE PHASES IN THE TECHNETIUM-HYDROGEN SYSTEM
DOKLADY AKADEMII NAUK SSSR 260(1), 132-135 (1981)
 72. ANTONOV, VE; BELASH, IT; PONYATOVSKII, EG; THIESSEN, VG; SHIRYAEV, VI.
MAGNETIZATION OF IRON HYDRIDE
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 65(1), K43-K48 (1981)
 73. DEGTYAREVA, VF; ANTONOV, VE; BELASH, IT; PONYATOVSKII, EG.
DISTORTIONS OF THE FCC CRYSTAL-LATTICE OF PD60CU40 ALLOY HYDROGENATED UNDER HIGH-PRESSURE
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 66(1), 77-86 (1981)
 74. FEDOTOV, V.K.; FEDOTOV, V.G.; KOST, M.E.; PONYATOVSKII, E.G..
HYDROGEN ORDERING IN AN FCC SOLID SOLUTION IN THE CASE OF RARE-EARTH HYDRIDES
SOVIET PHYSICS - SOLID STATE 24(7), 1252 (1982)
 75. DEGTYAREVA, V.F.; IVAKHNENKO, S.A.; PONYATOVSKII, E.G.; RASHCHUPKIN, V.I..
EFFECTS OF HIGH PRESSURES ON INBI-BI ALLOYS
SOVIET PHYSICS - SOLID STATE 24(5), 770 (1982)
 76. ANTONOV, VE; ANTONOVA, TE; BELASH, IT; GORODETSKII, AE; PONIATOVSKII, EG.
SYNTHESIS OF GOLD HYDRIDE UNDER HIGH HYDROGEN PRESSURE
DOKLADY AKADEMII NAUK SSSR 266(2), 376-380 (1982)
 77. ANTONOV, VE; ANTONOVA, TE; BELASH, IT; PONYATOVSKY, EG; RASHCHUPKIN, VI; THIESSEN, VG.
THE PD-NI-H SYSTEM AT HIGH-PRESSURES
JOURNAL OF THE LESS-COMMON METALS 88(1), 50-50 (1982)
 78. PONYATOVSKY, EG; ANTONOV, VE; BELASH, IT; DEGTYAREVA, VF; THIESSEN, VG.
PHASE-TRANSFORMATIONS IN THE FE-H SYSTEM AT PRESSURES UP TO 67-KBAR
JOURNAL OF THE LESS-COMMON METALS 88(1), 26-26 (1982)
 79. ANTONOV, VE; BELASH, IT; PONYATOVSKY, EG.
T-P PHASE-DIAGRAM OF THE FE-H SYSTEM AT TEMPERATURES TO 450-DEGREES-C AND PRESSURES TO 6.7 GPA
SCRIPTA METALLURGICA 16(2), 203-208 (1982)
 80. BASHKIN, IO; BELASH, IT; KEDROVA, NS; MALTSEVA, NN; PONYATOVSKII, EG.
DISSOCIATION OF COPPER AND ZINC HYDRIDES AT HIGH-PRESSURES
ZHURNAL NEORGANICHESKOI KHIMII 27(8), 1911-1914 (1982)
 81. BASHKIN, IO; DEGTYAREVA, VF; DERGACHEV, YM; PONYATOVSKII, EG.
THE STRUCTURAL TRANSITION FROM NaCl TO CsCl TYPE IN CESIUM HYDRIDE
PHYSICA STATUS SOLIDI B-BASIC RESEARCH 114(2), 731-734 (1982)
 82. PONYATOVSKII, EG; KAZANDZHAN, BI.
PHASE-EQUILIBRIA IN THE TL-SE SYSTEM AT HIGH-PRESSURES
INORGANIC MATERIALS 18(5), 630-636 (1982)
 83. DEGTYAREVA, VF; PONYATOVSKII, EG.
HIGH-PRESSURE PHASES IN B-ELEMENT ALLOYS - A NEW TYPE OF ELECTRON PHASES
FIZIKA TVERDOGO TELA 24(9), 2672-2681 (1982)
 84. FEDOTOV, VK; FEDOTOV, VG; KOST, ME; PONYATOVSKII, EG.
HYDROGEN ORDERING IN AN FCC SOLID-SOLUTION IN RE METAL-HYDRIDES
FIZIKA TVERDOGO TELA 24(7), 2201-2208 (1982)
 85. DEGTYAREVA, VF; IVAKHNENKO, SA; PONYATOVSKII, EG; RASHCHUPKIN, VI.
HIGH-PRESSURE EFFECT ON INBI-BI ALLOYS
FIZIKA TVERDOGO TELA 24(5), 1360-1367 (1982)
 86. DEGTYAREVA, V.F.; BELASH, I.T.; CHIPENKO, G.V.; PONYATOVSKII, E.G.; RASHCHUPKIN, V.I..
INTERMEDIATE PHASES OBTAINED BY APPLYING HIGH PRESSURE TO THE IN-SB SYSTEM
SOVIET PHYSICS - SOLID STATE 25(10), 1712 (1983)

87. ANTONOV, VE; ANTONOVA, TE; BELASH, IT; PONYATOVSKII, EG; RASHUPKIN, VI.
SUPERCONDUCTIVITY OF PD-AU-H SOLID-SOLUTIONS
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 77(1), K23-K27 (1983)
88. ANTONOV, VE; ANTONOVA, TE; BELASH, IT; PONYATOVSKII, EG; RASHUPKIN, VI; THIESSEN, VG.
THE PD-NI-H SYSTEM AT HIGH-PRESSURE
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 77(1), 71-79 (1983)
89. ANTONOV, VE; ANTONOVA, TE; BELASH, IT; PONYATOVSKII, EG; RASHUPKIN, VI.
THE PD-PT-H SYSTEM - PHASE-TRANSFORMATIONS AT HIGH-PRESSURE AND
SUPERCONDUCTIVITY
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 78(1), 137-146 (1983)
90. CHIPENKO, G.V.; DEGTYAREVA, V.F.; PONYATOVSKII, E.G..
HIGH-PRESSURE PHASE IN GERMANIUM-ANTIMONY ALLOYS
SOVIET PHYSICS - SOLID STATE 25(4), 706 (1983)
91. ANTONOV, VE; BELASH, IT; MALYSHEV, VI; PONIATOVSKII, EG; TULINA, NA.
HYDROGEN SOLUBILITY IN RHENIUM UNDER PRESSURES UP TO 90-KBAR
DOKLADY AKADEMII NAUK SSSR 269(3), 617-619 (1983)
92. ANTONOV, VE; BELASH, IT; MALYSHEV, VI; PONIATOVSKII, EG.
NEW HIGH-PRESSURE PHASE IN THE COBALT-HYDROGEN SYSTEM
DOKLADY AKADEMII NAUK SSSR 272(5), 1147-1150 (1983)
93. DEGTYAREVA, V.F.; CHIPENKO, G.V.; PONYATOVSKII, E.G.; RASHCHUPKIN, V.I..
SUPERCONDUCTIVITY OF ALUMINIUM DOPED WITH GERMANIUM AND SILICON UNDER
PRESSURE
SOVIET PHYSICS - SOLID STATE 26(4), 733 (1984)
94. ANTONOV, VE; BELASH, IT; PONIATOVSKII, EG.
CHANGE IN GEOMETRIC DIMENSIONS OF NICKEL SAMPLES DURING THE HYDROGENATION
DOKLADY AKADEMII NAUK SSSR 278(4), 892-896 (1984)
95. BASHKIN, IO; KOST, ME; PONYATOVSKII, EG.
PHASE-TRANSITIONS IN NON-STOICHIOMETRIC CERIUM HYDRIDES
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 83(2), 461-465 (1984)
96. GLAZKOV, VP; IRODOVA, AV; SOMENKOV, VA; SHILSHEIN, SS; ANTONOV, VE; PONYATOVSKII, EG.
NEUTRON-DIFFRACTION STUDY OF THE STRUCTURE OF TECHNETIUM HYDRIDES
FIZIKA TVERDOGO TELA 26(11), 3261-3265 (1984)
97. PONYATOVSKII, EG; SINITSYN, VV; BARANOV, AI; DOBRZHANSKII, GF.
HYDROSTATIC-PRESSURE EFFECT ON PROTON CONDUCTIVITY IN NH₄IO₃.2HIO₃ AND KIO₃.2HIO₃
CRYSTALS
FIZIKA TVERDOGO TELA 26(2), 524-528 (1984)
98. PONYATOVSKII, E.G.; BASHKIN, I.O.; DEGTYAREVA, V.F.; RASHCHUPKIN, V.I.; BARKALOV, O.I.;
AKSENOV, YU.A..
HIGH-PRESSURE-INDUCED SUPERCONDUCTIVITY OF THE TITANIUM-HYDROGEN SYSTEM
SOVIET PHYSICS - SOLID STATE 27(11), 2077 (1985)
99. ALLAKHVERDIEV, K.R.; MAMEDOV, T.G.; PERESADA, G.I.; PONYATOVSKII, E.G.; SHARIFOV, YA.N..
PHASE DIAGRAMS OF LAYER SEMICONDUCTORS TLIN₂S₂ AND TLGASE₂ UNDER HYDROSTATIC
PRESSURES UP TO 1.2 GPA
SOVIET PHYSICS - SOLID STATE 27(3), 568 (1985)
100. BARANOV, A.I.; PONYATOVSKII, E.G.; SINITSYN, V.V.; FEDOSYUK, R.M.; SHUVALOV, L.A..
SUPERIONIC CONDUCTIVITY INDUCED IN NH₄HSO₄ CRYSTAL BY HYDROSTATIC PRESSURE
SOVIET PHYSICS - CRYSTALLOGRAPHY 30(6), 653 (1985)
101. WORDEL, R; WAGNER, FE; ANTONOV, VE; PONYATOVSKII, EG; PERMOGOROV, A; PLACHINDA, A;
MAKAROV, EF.
MOSSBAUER STUDY OF IRON HYDRIDE PRODUCED UNDER HIGH-PRESSURE
ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE NEUE FOLGE 145, 121-127 (1985)
102. SHILSTEIN, SS; GLAZKOV, VP; IRODOVA, AV; SOMENKOV, VA; ANTONOV, VE; PONYATOVSKII, EG.
THE CRYSTAL-STRUCTURE OF HIGH-PRESSURE HYDRIDES
ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE NEUE FOLGE 146, 129-135 (1985)

103. PONYATOVSKII, EG; BASHKIN, IO.
NEW PHASE-TRANSITIONS IN HYDRIDES OF THE I-A, III-A, AND IV-A GROUP-METALS
ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE NEUE FOLGE 146, 137-157 (1985)
104. BASHKIN, IO; DERGACHEV, YM; PONYATOVSKII, EG.
PRESSURE-INDUCED PHASE-TRANSITION IN RBH
PHYSICA STATUS SOLIDI B-BASIC RESEARCH 130(1), 73-77 (1985)
105. DEGTYAREVA, VF; CHIPENKO, GV; BELASH, IT; BARKALOV, OI; PONYATOVSKII, EG.
FCC SOLID-SOLUTIONS IN AL-GE AND AL-SI ALLOYS UNDER HIGH-PRESSURE
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH 89(2), K127-K131 (1985)
106. PONYATOVSKII, EG; RASHCHUPKIN, VI; SINITSYN, VV; BARANOV, AI; SCHUVALOV, LA; SHCHAGINA, NM.
P-T PHASE-DIAGRAM OF A PROTON SUPERIONIC CONDUCTOR CSHSO4
JETP LETTERS 41(3), 139-141 (1985)
107. DEGTYAREVA, V.F.; BASHKIN, I.O.; MOGILYANSKII, D.N.; PONYATOVSKII, E.G..
PHASE TRANSITIONS IN TIH0.71 AND TIH0.85
SOVIET PHYSICS - SOLID STATE 28(6), 940 (1986)
108. BELASH, IT; SOLOZHENKO, VL; PONIATOVSKII, EG; KALASHNIKOV, JA.
STABILITY OF THE GRAPHITE-FECL3 STRATIFIED COMPOUND UNDER PRESSURES UP TO 70 KBAR
AND TEMPERATURES UP TO 550-DEGREES-C
DOKLADY AKADEMII NAUK SSSR 286(4), 894-896 (1986)
109. ANTONOV, VE; BELASH, IT; MALYSHEV, VY; PONYATOVSKY, EG.
THE SOLUBILITY OF HYDROGEN IN THE PLATINUM METALS UNDER HIGH-PRESSURE (*REPRINTED
FROM PLATINUM METALS REVIEW, VOL 28, 1984*)
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY 11(3), 193-197 (1986)
110. SOLOZHENKO, VL; BELASH, IT; KALASHNIKOV, YA; PONYATOVSKII, EG.
REDUCTION OF THE LAMINAR COMPOUND OF GRAPHITE WITH FECL3 BY HYDROGEN AT HIGH-
PRESSURE
BULLETIN OF THE ACADEMY OF SCIENCES OF THE USSR DIVISION OF CHEMICAL SCIENCE 35(2), 417-
419 (1986)
111. WORDEL, R; WAGNER, FE; ANTONOV, VE; PONYATOVSKII, EG; PERMOGOROV, A; PLACHINDA, A;
MAKAROV, EF.
MOSSBAUER STUDY OF IRON HYDRIDE PRODUCED UNDER HIGH-PRESSURE
HYPERFINE INTERACTIONS 28(1-4), 1005-1008 (1986)
112. WORDEL, R; WAGNER, FE; ANTONOV, VE; PONYATOVSKII, EG; PERMOGOROV, A; PLACHINDA, A;
MAKAROV, EF.
MOSSBAUER STUDY OF IRON HYDRIDE PRODUCED UNDER HIGH-PRESSURE
HYPERFINE INTERACTIONS 28(1-4), 1005-1008 (1986)
113. BELASH, IT; MALYSHEV, VY; PONOMAREV, BK; PONYATOVSKII, EG; SOKOLOV, AY.
THE MAGNETIZATION OF COBALT HYDRIDES
FIZIKA TVERDOGO TELA 28(5), 1317-1323 (1986)
114. ANTONOV, VE; ANTONOVA, TE; BELASH, IT; MALYSHEV, VO; PONYATOVSKII, EG; RASHCHUPKIN, VI.
SUPERCONDUCTIVITY AND CRYSTAL-STRUCTURE OF HIGH-PRESSURE PHASES IN THE TA-RU-H
SYSTEM
FIZIKA TVERDOGO TELA 28(8), 2352-2357 (1986)
115. BARANOV, AI; SINITSYN, VV; PONYATOVSKII, EG; SHUVALOV, LA.
PHASE-TRANSITIONS IN SURFACE-LAYERS OF HYDROSULFATE CRYSTALS
JETP LETTERS 44(4), 237-240 (1986)
116. TISSEN, VG; PONYATOVSKII, EG; KULAKOV, VM; LOBANOV, FI; SHIGIN, VK.
APPARATUS FOR RECORDING FERROMAGNETIC-PARAMAGNETIC TRANSITIONS AT PRESSURES TO
30 GPA
INSTRUMENTS AND EXPERIMENTAL TECHNIQUES 29(5), 1178-1179 (1986)
117. BELASH, IT; DEGTYAREVA, VF; PONYATOVSKII, EG.
NEW PHASES OF THE HUME-ROTHERY-SUPERCONDUCTORS-TYPE, OBTAINED AT HIGH-PRESSURES
USPEKHI FIZICHESKIKH NAUK 150(3), 463-465 (1986)

118. ANTONOV, VE; BELASH, IT; PONYATOVSKII, EG.
HYDRIDES - INVESTIGATIONS AT HIGH HYDROGEN PRESSURE
USPEKHI FIZICHESKIKH NAUK 150(3), 468-469 (1986)
119. BELASH, I.T.; DEGTYAREVA, V.F.; PONYATOVSKII, E.G.; RASHCHUPKIN, V.I..
NEW INTERMEDIATE PHASES AND AMORPHOUS STATE OF CD-SB AND ZN-SB ALLOYS AFTER
APPLICATION OF HIGH PRESSURES
SOVIET PHYSICS - SOLID STATE 29(6), 1028 (1987)
120. BARKALOV, O.I.; BELASH, I.T.; DEGTYAREVA, V.F.; PONYATOVSKII, E.G..
CRYSTALLINE AND AMORPHOUS STATES OF AL-GE ALLOYS AFTER APPLICATION OF HIGH PRESSURES
SOVIET PHYSICS - SOLID STATE 29(7), 1138 (1987)
121. IRODOVA, A.V.; GLAZKOV, V.P.; SOMENKOV, V.A.; SHIL'SHTEIN, S.SH.; ANTONOV, V.E.;
PONYATOVSKII, E.G..
NEUTRON-DIFFRACTION STUDY OF ANTIFERROMAGNETIC ORDERING IN MANGANESE HYDRIDES
SOVIET PHYSICS - SOLID STATE 29(9), 1562 (1987)
122. PONYATOVSKII, E.G.; BASHKIN, I.O.; AKSENOV, YU.A..
INVESTIGATION OF THE PHASE DIAGRAM OF THE TI-H SYSTEM AT PRESSURES UP TO 80 KBAR AND
NEAR-EUTECTOID TEMPERATURES
FIZIKAMETALLOVIMETALLOVEDENIE 64(6), 1110 (1987)
123. PONYATOVSKY, EG; BASHKIN, IO; DEGTYAREVA, VF; AKSENOV, YA; RASHCHUPKIN, VI;
MOGILYANSKY, DN.
PHASE-TRANSFORMATIONS IN THE TI-H SYSTEM AT HIGH-PRESSURES
JOURNAL OF THE LESS-COMMON METALS 129, 93-103 (1987)
124. ANTONOV, VE; BELASH, IT; PONYATOVSKII, EG; RASHCHUPKIN, VI; ROMANENKO, IM.
SUPERCONDUCTIVITY AND CRYSTAL-STRUCTURE OF HIGH-PRESSURE PHASES IN THE V-RU-H
SYSTEM
FIZIKA TVERDOGO TELA 29(3), 665-671 (1987)
125. ANTONOV, BE; ANTONOVA, TE; BELASH, IT; PONYATOVSKII, EG; RASHCHUPKIN, VI.
SUPERCONDUCTIVITY AND CRYSTAL-STRUCTURE OF HIGH-PRESSURE PHASES IN THE NB-RU-H
SYSTEM
FIZIKA TVERDOGO TELA 29(4), 1017-1025 (1987)
126. TISSEN, VG; PONYATOVSKII, EG.
BEHAVIOR OF THE CURIE-TEMPERATURE OF EUO AT PRESSURES UP TO 20 GPA
JETP LETTERS 46(7), 361-364 (1987)
127. SINITSYN, V.V.; PONYATOVSKII, E.G.; BARANOV, A.I.; SHUVALOV, L.A.; BOBROVA, N.I..
SUPERIONIC CONDUCTIVITY AND P-T PHASE DIAGRAM OF RBHSO₄
SOVIET PHYSICS - SOLID STATE 30(9), 1636 (1988)
128. BASHKIN, I.O.; MALYSHEV, V.YU.; RASHCHUPKIN, V.I.; PONYATOVSKII, E.G..
COMPOSITION AND SUPERCONDUCTIVITY OF HIGH-PRESSURE PHASES IN THE TITANIUM-
HYDROGEN AND TITANIUM-DEUTERIUM SYSTEMS
SOVIET PHYSICS - SOLID STATE 30(7), 1155 (1988)
129. BARKALOV, O.I.; BELASH, I.T.; BOL'SHAKOV, A.I.; PONYATOVSKII, E.G..
CALORIMETRIC INVESTIGATION OF AMORPHIZATION AND SUBSEQUENT CRYSTALLIZATION OF A
HIGH-PRESSURE PHASE IN THE ZN-SB SYSTEM
SOVIET PHYSICS - SOLID STATE 30(9), 1570 (1988)
130. ANTONOV, V.E.; ANTONOVA, T.E.; BELASH, I.T.; ZHARIKOV, O.V.; PAL'NICHENKO, A.V.;
PONYATOVSKII, E.G.; RASHCHUPKIN, V.I..
SUPERCONDUCTING NB-RH-H PHASES WITH HYDROGEN CONCENTRATIONS UP TO H/ME=2
SOVIET PHYSICS - SOLID STATE 30(7), 1240 (1988)
131. OSIPYAN, YA; PONYATOVSKII, EG; MALYSHEV, VY; PERESADA, GI; BASHKIN, IO; RASHCHUPKIN, VI;
KONDAKOV, SF; BORODIN, VA; PERESADA, AG; NERSESYAN, MD; BOROVINSKAYA, IP.
EFFECT OF HYDROSTATIC-PRESSURE UP TO 65-KBAR ON THE SUPERCONDUCTING TRANSITIONS IN
YBA₂CU₃OY, GDBA₂CU₃OY AND LA₂-XSRXCUOY
FIZIKA TVERDOGO TELA 30(3), 904-906 (1988)

132. BAGDUEV, EG; KOROVKIN, EV; PERESADA, GI; PONYATOVSKII, EG; SHIKHSAIDOV, MS.
DARK INSTABILITY OF F-CENTERS IN PRESSURE-TREATED KCL AND KBR CRYSTALS
PHYSICA STATUS SOLIDI B-BASIC RESEARCH 146(1), 75-80 (1988)
133. IRODOVA, AV; GLAZKOV, VP; SOMENKOV, VA; SHILSHTEIN, SS; ANTONOV, VE; PONYATOVSKII, EG.
NEUTRON-DIFFRACTION INVESTIGATION OF MOLYBDENUM, RHODIUM AND NICKEL HYDRIDES
STRUCTURE
KRISTALLOGRAFIYA 33(3), 769-771 (1988)
134. NATKANETS, I; BELUSHKIN, AV; GOREMYCHKIN, EA; MAIER, Y; SASHIN, IL; FEDOTOV, VK; NIKOLAEV,
RK; PONYATOVSKII, EG; SIDOROV, NS.
DEPENDENCE OF THE PHONON STATE DENSITY OF THE CERAMIC YBA₂CU₃O_X ON THE OXYGEN
CONCENTRATION AND TEMPERATURE
JETP LETTERS 48(3), 181-186 (1988)
135. BARKALOV, OI; BELASH, IT; GANTMAKHER, VF; PONYATOVSKII, EG; TEPLINSKII, VM.
METAL-INSULATOR-TRANSITION DURING THE ORDER-DISORDER TRANSITION OF A METASTABLE
PHASE IN THE ZN-SB SYSTEM
JETP LETTERS 48(10), 609-613 (1988)
136. PONIATOVSKII, EG; BASHKIN, IO; SENKOV, ON; MALYSHEV, VI.
INFLUENCE OF TEMPERATURE, STRAIN RATE AND HYDROGEN CONCENTRATION ON THE EFFECT OF
HYDROGEN PLASTICIZATION OF TI-6AL-2ZR-V-MO ALLOY
DOKLADY AKADEMII NAUK SSSR 306(3), 613-616 (1989)
137. GORBUNOV, V. I.; GAVRICHEV, K. S.; TOTROVA, G. A.; SENIN, M. D.; CHIRIN, N. A.; BELASH, I. T.;
PONYATOVSKII, E. G..
LOW-TEMPERATURE HEAT CAPACITY OF THE CRYSTALLINE PHASES OF A-BERYLLIUM DIHYDRIDE
AND A-BERYLLIUM DIDEUTERIDE
ZHUR. FIZ. KHIM 63, (1989)
138. TEPLINSKII, V.M.; BASHKIN, I.O.; MALYSHEV, V.YU.; PONYATOVSKII, E.G..
THE EPSILON-DELTA PHASE TRANSFORMATION IN THE HYDRIDE TIH_{0.71}. SUPERCONDUCTIVITY
AND RESISTIVITY
SOVIET PHYSICS - SOLID STATE 31(2), 225 (1989)
139. SINITSYN, V.V.; BASHKIN, I.O.; PONYATOVSKII, E.G.; PROKOPENKO, V.M.; DILANYAN, R.A.;
SHEKHTMAN, V.SH.; NEVEDOMSKAYA, M.A.; KREMENSKAYA, I.N.; SIDOROV, N.S.; NIKOLAEV, R.K.;
SOKOLOVSKAYA, ZH.D..
INFLUENCE OF HYDROGEN ON THE SUPERCONDUCTING CERAMIC YBA₂CU₃O_Y (Y=6.91 AND 6.54)
SOVIET PHYSICS - SOLID STATE 31(12), 2056 (1989)
140. PONYATOVSKII, E.G.; BASHKIN, I.O.; SEN'KOV, O.N.; MALYSHEV, V.YU..
EFFECT OF TEMPERATURE, STRAIN RATE, AND HYDROGEN CONCENTRATION ON THE HYDROGEN
PLASTICIZATION OF VT20 TITANIUM ALLOY
SOVIET PHYSICS - DOKLADY 34(5), 475 (1989)
141. PONYATOVSKII, E.G.; BASHKIN, I.O.; SEN'KOV, O.N.; AKSENOV, YU.A.; KOLMOGOROV, V.L.; TALUTS,
G.G.; KATAYA, V.K.; LEVIN, I.V.; POTAPENKO, YU.I.; TRUBIN, A.N..
INFLUENCE OF HYDROGEN ON THE PLASTICITY AND RESISTANCE TO DEFORMATION OF VT20
TITANIUM ALLOY AT TEMPERATURES UP TO 740DEGC
FIZIKAMETALLOVIMETALLOVEDENIE 68(6), 1167 (1989)
142. IRODOVA, AV; GLAZKOV, VP; SOMENKOV, VA; ANTONOV, VE; PONYATOVSKY, EG.
HYDROGEN CAUSED ORDERING IN PDAG ALLOY
ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE NEUE FOLGE 163, 53-57 (1989)
143. DORNER, B; BELASH, IT; BOKHENKOV, EL; PONYATOVSKY, EG; ANTONOV, VE; PRONINA, LN.
INELASTIC INCOHERENT NEUTRON-SCATTERING SPECTRA FROM FCC NIH1.05, HCP CRH1.0 AND
HCP MOH1.2 AT 15K
SOLID STATE COMMUNICATIONS 69(2), 121-124 (1989)
144. DORNER, B; ANTONOV, VE; BELASH, IT; BOKHENKOV, EL; PONIATOVSKY, EG; PRONINA, LN.
HIGH-FREQUENCY VIBRATIONS OF H-ATOMS IN TRANSITION-METALS AND ALLOYS MEASURED BY
INELASTIC NEUTRON-SCATTERING
ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE NEUE FOLGE 164, 1079-1082 (1989)

145. KOLESNIKOV, AI; MONKENBUSCH, M; PRAGER, M; BASHKIN, IO; MALYSHEV, VY; PONYATOVSKII, EG.
NEUTRON-SCATTERING INVESTIGATION OF METASTABLE PHASES OF TITANIUM HYDRIDE AFTER
QUENCHING UNDER HIGH-PRESSURE
ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE NEUE FOLGE 163, 709-714 (1989)
146. BASHKIN, IO; MALYSHEV, VY; MOROZOV, SI; SUMIN, BV; TEPLINSKII, VM; PONYATOVSKII, EG.
SUPERCONDUCTIVITY CREATED IN HYDROGEN DOPED TI6O
FIZIKA TVERDOGO TELA 31(2), 240-242 (1989)
147. OSIPYAN, YA; BOKHENKOV, EL; GOLOSOVSKII, IV; ZHARIKOV, OV; KRASHENINNIKOV, AV;
KUZNETSOV, SA; NIKOLAEV, RK; PLAKHTII, VP; PONYATOVSKII, EG; RASHCHUPKIN, VI; SIDOROV, NS;
SOVESTNOV, AE; FEDOROVA, EI; KHARCHENKOV, VP.
NEUTRON-DIFFRACTION OF Y-BA-CU-O-CL CERAMIC
JETP LETTERS 49(4), 248-252 (1989)
148. SINITSYN, VV; BASHKIN, IO; PONYATOVSKII, EG; RASHCHUPKIN, VI; KONDAKOV, SF; PROKOPENKO,
VM.
EFFECT OF HYDROGEN ON THE SUPERCONDUCTIVITY OF BI2CA3SR2CU4O12+DELTA
FIZIKA TVERDOGO TELA 31(11), 275-276 (1989)
149. NATKANIEC, I; BELUSHKIN, AV; BRANKOWSKI, J; GOREMYCHKIN, EA; MAYER, J; SASHIN, IL;
FEDOTOV, VK; KOLESNIKOV, AI; BASHKIN, IO; SINICYN, VV; PONYATOVSKII, EG.
HYDROGEN VIBRATIONS IN HXYBA2CU3O7 SUPERCONDUCTING CERAMICS
PHYSICA C 162, 1369-1370 (1989)
150. PONYATOVSKII, E.G.; SEN'KOV, O.H.; BASHKIN, I.O..
THE INFLUENCE OF INITIAL STRUCTURE ON THE EFFECT OF HYDROGEN ON THE PLASTICITY OF
TITANIUM ALLOY VT20
METALLOFIZIKA 12(5), 20 (1990)
151. MOGILYANSKII, D.N.; BASHKIN, I.O.; DEGTYAREVA, V.F.; MALYSHEV, V.YU.; PONYATOVSKII, E.G..
X-RAY DIFFRACTION INVESTIGATION OF THE STRUCTURE OF THE DELTA PHASE AND OF THE
DELTARARRALPHA+GAMMA TRANSFORMATION IN THE TITANIUM-HYDROGEN SYSTEM
SOVIET PHYSICS - SOLID STATE 32(6), 1039 (1990)
152. DEGTYAREVA, V.F.; BELASH, I.T.; PONYATOVSKII, E.G.; RASHCHUPKIN, V.I..
TRANSITION TO THE AMORPHOUS STATE FROM THE HIGH-PRESSURE CRYSTALLINE PHASE OF
GALLIUM ANTIMONIDE
SOVIET PHYSICS - SOLID STATE 32(5), 834 (1990)
153. BASHKIN, I.O.; BARKALOV, I.M.; BOL'SHAKOV, A.I.; MALYSHEV, V.Y.; PONYATOVSKII, E.G..
THERMAL EFFECTS ASSOCIATED WITH PRECIPITATION OF A METASTABLE PHASE IN TI-H AND TI-D
SYSTEMS
SOVIET PHYSICS - SOLID STATE 32(9), 1556 (1990)
154. PONYATOVSKY, EG; BELASH, IT; BARKALOV, OI.
PRESSURE-INDUCED AMORPHOUS PHASES
JOURNAL OF NON-CRYSTALLINE SOLIDS 117, 679-687 (1990)
155. WORDEL, R; BAIER, M; SCHNEIDER, G; WAGNER, FE; ANTONOV, VE; PONYATOVSKY, EG;
KOPILOVSKII, Y; MAKAROV, EF.
A FE-57 MOSSBAUER STUDY OF THE HIGH-PRESSURE HYDRIDE PHASES OF FE AND CO
HYPERFINE INTERACTIONS 54(1-4), 891-894 (1990)
156. BARKALOV, OI; BELASH, IT; ESİPOV, SE; GANTMAKHER, VF; PONYATOVSKII, EG; TEPLINSKII, VM.
RESISTANCE SCALING IN INHOMOGENEOUS-MEDIA IN THE VICINITY OF A METAL-INSULATOR-
TRANSITION
PHYSICA B 165, 311-312 (1990)
157. PONYATOVSKII, E.G.; SEN'KOV, O.N.; BASHKIN, I.O..
MECHANICAL PROPERTIES OF VT20 TITANIUM ALLOY SAMPLES WITH DIFFERENT INITIAL STATES
AND DIFFERENT HYDROGEN CONCENTRATIONS
FIZIKAMETALLOVIMETALLOVEDENIE (8), 191 (1991)
158. BALAGUROV, A.M.; BASHKIN, I.O.; KOLESNIKOV, A.I.; MALYSHEV, V.YU.; MIRONOVA, G.M.;
PONYATOVSKII, E.G.; FEDOTOV, V.K..
NEUTRON-DIFFRACTION DETERMINATION OF THE KINETICS OF THE EPSILON-DELTA PHASE

- TRANSITION IN TiD_{0.74}
SOVIET PHYSICS - SOLID STATE 33(4), 711 (1991)
159. SINITSYN, V.V.; PONYATOVSKII, E.G.; BARANOV, A.I.; TREGUBCHENKO, A.V.; SHUVALOV, L.A..
PROTON-CONDUCTIVITY ANISOTROPY IN CSHSO₄ AND CSDSO₄ CRYSTALS AND ITS RESPONSE TO
HYDROSTATIC PRESSURE
SOVIET PHYSICS - JETP 73(2), 386 (1991)
160. ANTONOV, VE; BELASH, IT; KOLESNIKOV, AI; MAIER, J; NATKANIEC, I; PONYATOVSKII, EG; FEDOTOV,
VK.
NEUTRON-SCATTERING STUDY OF THE VIBRATIONAL-SPECTRUM OF MANGANESE HYDRIDE
FIZIKA TVERDOGO TELA 33(1), 152-157 (1991)
161. BALAGUROV, AM; BARKALOV, OI; KOLESNIKOV, AI; MIRONOVA, GM; PONYATOVSKII, EG; SINITSYN,
VV; FEDOTOV, VK.
NEUTRON-DIFFRACTION STUDY OF PHASE-TRANSITIONS OF HIGH-PRESSURE METASTABLE ICE-VIII
JETP LETTERS 53(1), 30-34 (1991)
162. DEGTYAREVA, VF; PONYATOVSKY, EG.
PRESSURE-QUENCHED PHASES IN BINARY B-METAL ALLOYS
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES
MICROSTRUCTURE AND PROCESSING 133, 734-737 (1991)
163. PONYATOVSKY, EG; BARKALOV, OI.
THERMOBARIC QUENCHING - A NEW METHOD FOR PRODUCING METASTABLE STATES
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES
MICROSTRUCTURE AND PROCESSING 133, 726-729 (1991)
164. DEGTYAREVA, VF; BELASH, IT; PONYATOVSKII, EG.
SPONTANEOUS AMORPHIZATION OF HIGH-PRESSURE PHASES IN BINARY-ALLOYS OF B-ELEMENTS
PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE 124(2), 465-471 (1991)
165. BELASH, IT; BARKALOV, OI; KOLESNIKOV, AI; PONYATOVSKII, EG; PRAGER, M.
INELASTIC NEUTRON-SCATTERING IN AMORPHOUS AND CRYSTALLINE PHASES OF ZN-SB AND CD-SB
SYSTEMS PRODUCED BY THERMOBARIC TREATMENTS
SOLID STATE COMMUNICATIONS 78(5), 331-334 (1991)
166. KOLESNIKOV, AI; PRAGER, M; TOMKINSON, J; BASHKIN, IO; MALYSHEV, VY; PONYATOVSKII, EG.
NEUTRON SPECTROSCOPY OF TiH_{0.74} AFTER HIGH-PRESSURE TREATMENT
JOURNAL OF PHYSICS-CONDENSED MATTER 3(32), 5927-5936 (1991)
167. SCHNEIDER, G; BAIER, M; WORDEL, R; WAGNER, FE; ANTONOV, VE; PONYATOVSKY, EG;
KOPILOVSKII, Y; MAKAROV, E.
MOSSBAUER STUDY OF HYDRIDES AND DEUTERIDES OF IRON AND COBALT
JOURNAL OF THE LESS-COMMON METALS 172, 333-342 (1991)
168. KOLESNIKOV, AI; NATKANIEC, I; ANTONOV, VE; BELASH, IT; FEDOTOV, VK; KRAWCZYK, J; MAYER, J;
PONYATOVSKY, EG.
NEUTRON SPECTROSCOPY OF MNH_{0.86}, NIH_{1.05}, PDH_{0.99} AND HARMONIC BEHAVIOR OF THEIR
OPTICAL PHONONS
PHYSICA B 174(1-4), 257-261 (1991)
169. VAL'KOVSKII, S.N.; EROFEEV, V.N.; PERESADA, G.I.; PONYATOVSKII, E.G..
STRUCTURAL TRANSFORMATIONS IN KCL CRYSTALS DUE TO A HIGH-PRESSURE PHASE TRANSITION
SOVIET PHYSICS - SOLID STATE 34(2), 192 (1992)
170. BASHKIN, I.O.; GUROV, A.F.; MALYSHEV, V.YU.; PONYATOVSKII, E.G..
DISSOCIATION OF MONOHYDRIDE AND EUTECTOID TRANSFORMATION IN THE Ti-H(D) SYSTEM
SOVIET PHYSICS - SOLID STATE 34(4), 674 (1992)
171. BASHKIN, I.O.; GUROV, A.F.; MALYSHEV, V.YU.; PONYATOVSKII, E.G..
VOLUME EFFECTS IN THE DISSOCIATION OF TITANIUM MONOHYDRIDE
SOVIET PHYSICS - SOLID STATE 34(8), 1386 (1992)
172. PONYATOVSKY, EG; BARKALOV, OI.
AMORPHIZATION OF SOLIDS AND HIGH-PRESSURE
MECHANICAL ALLOYING 88, 431-437 (1992)

173. KOLESNIKOV, AI; BASHKIN, IO; MALYSHEV, VY; PONYATOVSKY, EG; PRAGER, M; TOMKINSON, J.
STRONG ANHARMONIC H(D) VIBRATIONS IN THE DELTA-PHASE OF TITANIUM HYDRIDE -
OBSERVATION OF BOUND MULTIPHONON STATES
PHYSICA B-CONDENSED MATTER 180, 284-286 (1992)
174. KOLESNIKOV, AI; LI, JC; ROSS, DK; SINITZIN, VV; BARKALOV, OI; BOKHENKOV, EL; PONYATOVSKII, EG.
INELASTIC INCOHERENT NEUTRON-SCATTERING STUDY OF D2O AND H2O ICE-VIII IN THE RANGE 2-
140 MEV
PHYSICS LETTERS A 168(4), 308-312 (1992)
175. FEDOTOV, VK; KOLESNIKOV, AI; SINITSYN, VV; PONYATOVSKII, EG; NATKANIEC, I; MAYER, J;
BRANKOWSKI, J; BELUSHKIN, AV.
INELASTIC NEUTRON-SCATTERING STUDY OF HYDROGEN IN SUPERCONDUCTING CERAMICS
FIZIKA TVERDOGO TELA 35(1), 189-197 (1993)
176. BASHKIN, IO; MALYSHEV, VY; PONYATOVSKY, EG.
PHASE-TRANSFORMATIONS IN THE TI-H AND ZR-H SYSTEMS AT HIGH AND ATMOSPHERIC
PRESSURES
ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE-INTERNATIONAL JOURNAL OF RESEARCH IN PHYSICAL
CHEMISTRY & CHEMICAL PHYSICS 179, 289-299 (1993)
177. BASHKIN, IO; MALYSHEV, VY; PONYATOVSKY, EG.
A STUDY OF THE TITANIUM MONOHYDRIDE AFTER PRESSURE TREATMENT
ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE-INTERNATIONAL JOURNAL OF RESEARCH IN PHYSICAL
CHEMISTRY & CHEMICAL PHYSICS 179, 111-117 (1993)
178. FEDOTOV, VK; KOLESNIKOV, AI; KULAKOV, VI; PONYATOVSKII, EG; NATKANIEC, I; MAYER, J;
KRAVCZYK, J.
INELASTIC NEUTRON-SCATTERING STUDY OF THE ANHARMONISM OF THE COPPER AND OXYGEN
ATOM VIBRATIONS IN YTTRIUM CERAMICS
FIZIKA TVERDOGO TELA 35(2), 310-319 (1993)
179. BARKALOV, OI; PONYATOVSKY, EG; ANTONOV, VE.
SOLID-STATE AMORPHIZATION OF THE GASB HIGH-PRESSURE PHASE
JOURNAL OF NON-CRYSTALLINE SOLIDS 156, 544-546 (1993)
180. ALEKSEEV, VA; BARKALOV, OI; ISAKOV, SL; ISHMAEV, SN; PONYATOVSKY, EG; SADIKOV, IP.
SHORT-RANGE ORDER IN AMORPHOUS ZN41SB59 OBTAINED BY THERMOPRESSURE PROCESSING
JOURNAL OF NON-CRYSTALLINE SOLIDS 156, 185-187 (1993)
181. ANTONOV, VE; ARAKELYAN, AE; BARKALOV, OI; GUROV, AF; PONYATOVSKY, EG; RASHUPKIN, VI;
TEPLINSKY, VM.
BULK AMORPHOUS ZN-SB UNDER NORMAL AND HIGH-PRESSURES - PHASE-TRANSFORMATIONS
AND RELAXATION PHENOMENA
JOURNAL OF ALLOYS AND COMPOUNDS 194(2), 279-285 (1993)
182. KOLESNIKOV, AI; BARKALOV, OI; BELASH, IT; PONYATOVSKY, EG; LASJAUNIAS, JC; BUCHENAU, U;
SCHOBER, HR; FRICK, B.
NEUTRON-SCATTERING AND SPECIFIC-HEAT STUDY OF ALGE AND ALSI ALLOYS QUENCHED UNDER
HIGH-PRESSURE
JOURNAL OF PHYSICS-CONDENSED MATTER 5(27), 4737-4748 (1993)
183. KOLESNIKOV, AI; BALAGUROV, AM; BASHKIN, IO; FEDOTOV, VK; MALYSHEV, VY; MIRONOVA, GM;
PONYATOVSKY, EG.
A REAL-TIME NEUTRON-DIFFRACTION STUDY OF PHASE-TRANSITIONS IN THE TI-D SYSTEM AFTER
HIGH-PRESSURE TREATMENT
JOURNAL OF PHYSICS-CONDENSED MATTER 5(29), 5045-5058 (1993)
184. BASHKIN, IO; KOLESNIKOV, AI; MALYSHEV, VY; PONYATOVSKY, EG; BORBELY, S; ROSTA, L; PEPY, G.
PHASE-SEPARATION IN TITANIUM HYDRIDES STUDIED BY SMALL-ANGLE NEUTRON-SCATTERING
JOURNAL DE PHYSIQUE IV 3(C8), 287-290 (1993)
185. KOLESNIKOV, AI; SINITSYN, VV; PONYATOVSKY, EG; NATKANIEC, I; SMIRNOV, LS.
NEUTRON-SCATTERING STUDIES OF THE VIBRATIONAL-SPECTRUM OF HIGH-DENSITY AMORPHOUS

- ICE IN COMPARISON WITH ICE IH AND VI
JOURNAL OF PHYSICS-CONDENSED MATTER 6(2), 375-382 (1994)
186. BASHKIN, IO; RASHCHUPKIN, VI; KOBELEV, NP; SOIFER, YM; PONYATOVSKII, EG; MORAVSKII, AP.
REVERSIBLE 1ST-ORDER PHASE-TRANSITION WITH A LARGE CHANGE IN VOLUME IN THE FULLERITE
C-60 UNDER PRESSURE
JETP LETTERS 59(4), 279-282 (1994)
187. BASHKIN, IO; RASHCHUPKIN, VI; GUROV, AF; MORAVSKY, AP; RYBCHENKO, OG; KOBELEV, NP;
SOIFER, YM; PONYATOVSKY, EG.
A NEW PHASE-TRANSITION IN THE T-P DIAGRAM OF C-60 FULLERITE
JOURNAL OF PHYSICS-CONDENSED MATTER 6(36), 7491-7498 (1994)
188. PONYATOVSKII, EG; SINAND, VV; POZDNYAKOVA, TA.
2ND CRITICAL-POINT AND LOW-TEMPERATURE ANOMALIES IN THE PHYSICAL-PROPERTIES OF
WATER
JETP LETTERS 60(5), 360-364 (1994)
189. KOLESNIKOV, AI; BASHKIN, IO; BELUSHKIN, AV; PONYATOVSKY, EG; PRAGER, M.
INELASTIC NEUTRON-SCATTERING STUDY OF ORDERED GAMMA-ZRH
JOURNAL OF PHYSICS-CONDENSED MATTER 6(43), 8989-9000 (1994)
190. KOLESNIKOV, AI; BALAGUROV, AM; BASHKIN, IO; BELUSHKIN, AV; PONYATOVSKY, EG; PRAGER, M.
NEUTRON-SCATTERING STUDIES OF ORDERED GAMMA-ZRD
JOURNAL OF PHYSICS-CONDENSED MATTER 6(43), 8977-8988 (1994)
191. BARKALOV, OI; KOLESNIKOV, AI; PONYATOVSKY, EG; DAHLBORG, U; DELAPLANE, R; WANNBERG, A.
NEUTRON-DIFFRACTION STUDY OF BULK AMORPHOUS ZN41SB59
JOURNAL OF NON-CRYSTALLINE SOLIDS 176(2-3), 263-270 (1994)
192. PONYATOVSKII, EG; SINAND, VV; POZDNYAKOVA, TA.
2ND CRITICAL-POINT AND LOW-TEMPERATURE ANOMALIES IN THE PHYSICAL-PROPERTIES OF
WATER (VOL 5, PG 360, 1994)
JETP LETTERS 60(12), 882-882 (1994)
193. BASHKIN, I.O.; KOLESNIKOV, A.L.; PONYATOVSKII, E.G.; BALAGUROV, A.M.; MIRONOVA, G.M..
STRUCTURE OF THE CHI-PHASE OF TlD0.73
PHYSICS OF THE SOLID STATE 37(12), 2065 (1995)
194. KOLESNIKOV, AI; SINITSYN, VV; BARKALOV, OI; PONYATOVSKY, EG; FEDOTOV, VK; BALAGUROV,
AM; MIRONOVA, GM; NATKANIEC, I; SMIRNOV, LS.
NEUTRON SCATTERING STUDIES OF STRUCTURAL TRANSFORMATIONS AND VIBRATIONAL SPECTRA
OF ICE AFTER HIGH PRESSURE TREATMENT
HIGH PRESSURE RESEARCH 14(1-3), 101-109 (1995)
195. BASHKIN, IO; KOLESNIKOV, AI; PONYATOVSKY, EG.
STRUCTURE AND LATTICE DYNAMICS OF TITANIUM HYDRIDES DUE TO THERMOBARIC TREATMENT
HIGH PRESSURE RESEARCH 14(1-3), 91-100 (1995)
196. PONYATOVSKII, EG; SINITSYN, VV; DILANYAN, RA; REDKIN, BS.
AMORPHIZATION OF RARE-EARTH MOLYBDATES UNDER HIGH-PRESSURE
JETP LETTERS 61(3), 222-226 (1995)
197. SINITSYN, VV; BARANOV, AI; PONYATOVSKY, EG; SHUVALOV, LA.
PRESSURE EFFECT ON PHASE-TRANSITIONS AND PROTONIC CONDUCTIVITY IN RB3H(SEO4)(2) AND
(NH4)(3)H(SO4)(2)
SOLID STATE IONICS 77, 118-121 (1995)
198. PONYATOVSKY, EG; POZDNYAKOVA, TA.
THE T-P PHASE-DIAGRAMS OF AMORPHOUS GASB, INSB AND INAS
JOURNAL OF NON-CRYSTALLINE SOLIDS 188(1-2), 153-160 (1995)
199. SINITSYN, VV; BARANOV, AI; PONYATOVSKII, EG.
PHASE P-T-DIAGRAMS AND PROTON CONDUCTIVITY IN RB3H(SEO4) AND (NH4)(3)H(SO4)(2)
CRYSTALS
FIZIKA TVERDOGO TELA 37(7), 2059-2069 (1995)
200. KOLESNIKOV, AI; SINITSYN, VV; PONYATOVSKY, EG; NATKANIEC, I; SMIRNOV, LS.
SIMILARITY OF VIBRATIONAL-SPECTRA OF HIGH-DENSITY AMORPHOUS ICE AND HIGH-PRESSURE

- PHASE ICE-VI
PHYSICA B 213, 474-476 (1995)
201. KOLESNIKOV, AI; BASHKIN, IO; BELUSHKIN, AV; PONYATOVSKY, EG; PRAGER, M; TOMKINSON, J.
PHONONS AND BOUND MULTIPHONONS IN THE GAMMA-PHASES OF TIH AND ZRH - NEUTRON
SPECTROSCOPY STUDIES
PHYSICA B-CONDENSED MATTER 213, 445-447 (1995)
202. ARONIN, AS; BARKALOV, OI; PONYATOVSKY, EG.
TRANSMISSION ELECTRON-MICROSCOPY OF ZN41SB59 QUENCHED HIGH-PRESSURE PHASE
AMORPHIZED BY SOLID-STATE REACTION
JOURNAL OF NON-CRYSTALLINE SOLIDS 189(1-2), 138-140 (1995)
203. ANTONOV, VE; BARKALOV, OI; PONYATOVSKY, EG.
CRYSTAL-TO-AMORPHOUS PHASE-TRANSFORMATION OF THE GA-SB HIGH-PRESSURE PHASE
JOURNAL OF NON-CRYSTALLINE SOLIDS 193, 443-446 (1995)
204. BASHKIN, IO; GUROV, AF; RASHCHUPKIN, VI; PONYATOVSKY, EG; MORAVSKY, AP.
HIGH-PRESSURE STUDY OF PHASE TRANSFORMATIONS IN C-60 FULLERITE
MOLECULAR CRYSTALS AND LIQUID CRYSTALS SCIENCE AND TECHNOLOGY SECTION C-MOLECULAR
MATERIALS 7(1-4), 271-276 (1996)
205. KOBELEV, NP; SOIFER, YM; BASHKIN, IO; MORAVSKY, AP; PONYATOVSKY, EG.
INTERNAL FRICTION AND ELASTIC PROPERTIES OF A NEW PRESSURE-INDUCED PHASE OF C-60
FULLERITE
MOLECULAR CRYSTALS AND LIQUID CRYSTALS SCIENCE AND TECHNOLOGY SECTION C-MOLECULAR
MATERIALS 7(1-4), 261-266 (1996)
206. BREUSOV, ON; ABROSIMOVA, GA; ANANIIN, AV; ARONIN, AS; DROBYSHEV, VN; TATSII, VF;
PONYATOVSKY, EG.
DIAMOND-LIKE AMORPHOUS CARBON AND NANOCRYSTALLINE DIAMOND OBTAINED BY
DETONATION METHOD
HIGH PRESSURE RESEARCH 15(3), 191-197 (1996)
207. DEGTYAREVA, VF; PORSCH, F; PONYATOVSKII, EG; HOLZAPFEL, WB.
STRUCTURAL INVESTIGATIONS OF THE AMORPHOUS ALLOY AL30GE70 UNDER HIGH PRESSURE
PHYSICAL REVIEW B 53(13), 8337-8339 (1996)
208. TISSEN, VG; PONYATOVSKII, EG; NEFEDOVA, MV; PORSCH, F; HOLZAPFEL, WB.
EFFECT OF PRESSURE ON THE SUPERCONDUCTING T-C OF LANTHANUM
PHYSICAL REVIEW B 53(13), 8238-8240 (1996)
209. ANTONOV, VE; ANTONOVA, TE; CHIRIN, NA; PONYATOVSKY, EG; BAIER, M; WAGNER, FE.
T-P PHASE DIAGRAM OF THE MN-H SYSTEM AT PRESSURES TO 4.4 GPA AND TEMPERATURES TO
1000 DEGREES C
SCRIPTA MATERIALIA 34(8), 1331-1336 (1996)
210. TISSEN, VG; PONYATOVSKII, EG; NEFEDOVA, MV; KLINKOVA, LA; BARKOVSKII, NV.
SUPERCONDUCTIVITY UNDER PRESSURE IN BA1-XKXBIO3-Y
JOURNAL OF PHYSICS-CONDENSED MATTER 8(17), 3069-3073 (1996)
211. BARKALOV, OI; ARONIN, AS; ABROSIMOVA, GE; PONYATOVSKY, EG.
FORMATION AND STRUCTURAL EVOLUTION OF THE BULK AMORPHOUS AL32GE68 ALLOY ON
HEATING
JOURNAL OF NON-CRYSTALLINE SOLIDS 202(3), 266-271 (1996)
212. ANTONOV, VE; BARKALOV, OI; KOLYUBAKIN, AI; PONYATOVSKY, EG.
ZNSB AND GASB BULK AMORPHOUS SEMICONDUCTORS: TRANSPORT PROPERTIES
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS 198(1), 497-501 (1996)
213. BARKALOV, OI; KOLESNIKOV, AI; ANTONOV, VE; PONYATOVSKY, EG; DAHLBORG, U; DAHLBORG, M;
HANNON, A.
BULK AMORPHOUS GA-SB SEMICONDUCTORS PREPARED BY THERMOBARIC TREATMENT:
FORMATION AND PROPERTIES
PHYSICA STATUS SOLIDI B-BASIC RESEARCH 198(1), 491-496 (1996)

214. SOIFER, YM; KOBELEV, NP; BASHKIN, IO; MORAVSKY, AP; PONYATOVSKY, EG.
ELASTIC AND DISSIPATIVE PROPERTIES OF SOLID C-60
JOURNAL DE PHYSIQUE IV 6(C8), 621-624 (1996)
215. KOLESNIKOV, AI; BASHKIN, IO; MORAVSKY, AP; ADAMS, MA; PRAGER, M; PONYATOVSKY, EG.
NEUTRON SCATTERING STUDY OF A HIGH-PRESSURE POLYMERIC C-60 PHASE
JOURNAL OF PHYSICS-CONDENSED MATTER 8(50), 10939-10949 (1996)
216. ANTONOV, VE; BARKALOV, OI; PONYATOVSKY, EG; ZAVOLOVICH, SA.
PHASE TRANSFORMATIONS OF AMORPHOUS GASB-GE ALLOY AT HIGH PRESSURES
HIGH PRESSURE RESEARCH 15(4), 201-220 (1997)
217. RAO, AM; EKLUND, PC; VENKATESWARAN, UD; TUCKER, J; DUNCAN, MA; BENDELE, GM; STEPHENS, PW; HODEAU, JL; MARQUES, L; NUNEZREGUEIRO, M; BASHKIN, IO; PONYATOVSKY, EG; MOROVSKY, AP.
PROPERTIES OF C-60 POLYMERIZED UNDER HIGH PRESSURE AND TEMPERATURE
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING 64(3), 231-239 (1997)
218. KOLESNIKOV, AI; ANTONOV, VE; BASHKIN, IO; GROSSE, G; MORAVSKY, AP; MUZYCHKA, AY; PONYATOVSKY, EG; WAGNER, FE.
NEUTRON SPECTROSCOPY OF C-60 FULLERITE HYDROGENATED UNDER HIGH PRESSURE; EVIDENCE FOR INTERSTITIAL MOLECULAR HYDROGEN
JOURNAL OF PHYSICS-CONDENSED MATTER 9(13), 2831-2838 (1997)
219. MORAVSKII, AP; BASHKIN, IO; EFIMOV, ON; KRINICHNAYA, EP; PONYATOVSKII, EG; STRELETS, VV.
ELECTROCHEMICAL POLYMERIZATION OF FULLERENE C-60
RUSSIAN CHEMICAL BULLETIN 46(4), 830-831 (1997)
220. KOLESNIKOV, AI; ANTONOV, VE; BASHKIN, IO; PONYATOVSKY, EG; MUZYCHKA, AY; MORAVSKY, AP; GROSSE, G; WAGNER, FE.
NEUTRON SPECTROSCOPY OF C60HX QUENCHED UNDER HYDROGEN PRESSURE
PHYSICA B 234, 10-12 (1997)
221. DAHLBORG, U; CALVODAHLBORG, M; KOLESNIKOV, AI; BARKALOV, OI; ANTONOV, VE; PONYATOVSKY, EG.
BULK AMORPHOUS ZN41SB59 AND GASB STUDIED BY NEUTRON DIFFRACTION
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING 226, 448-452 (1997)
222. BASHKIN, IO; IZOTOV, AN; MORAVSKY, AP; NEGRII, VD; NIKOLAEV, RK; OSSIPYAN, YA; PONYATOVSKY, EG; STEINMAN, EA.
PHOTOLUMINESCENCE OF SOLID C-60 POLYMERIZED UNDER HIGH PRESSURE
CHEMICAL PHYSICS LETTERS 272(1-2), 32-37 (1997)
223. KOLESNIKOV, AI; SINITSYN, VV; PONYATOVSKY, EG; NATKANIEC, I; SMIRNOV, LS; LI, JC.
NEUTRON-SCATTERING STUDIES OF ICE PREPARED BY DIFFERENT THERMOBARIC TREATMENTS
JOURNAL OF PHYSICAL CHEMISTRY B 101(32), 6082-6086 (1997)
224. PONYATOVSKII, EG.
PSEUDOCRITICAL POINT ON THE MELTING CURVE OF A METASTABLE PHASE
JETP LETTERS 66(4), 281-284 (1997)
225. CORNELL, K; WIPF, H; ANTONOV, VE; ANTONOVA, TE; KOLESNIKOV, AI; PONYATOVSKY, EG; DORNER, B.
THE INELASTIC NEUTRON SCATTERING SPECTRUM OF DHCP IRON HYDRIDE
POLISH JOURNAL OF CHEMISTRY 71(12), 1792-1796 (1997)
226. BASHKIN, IO; IZOTOV, AN; NEGRII, VD; NIKOLAEV, RK; OSSIPYAN, YA; PONYATOVSKY, EG; STEINMAN, EA; MORAVSKY, AP.
PHOTOLUMINESCENCE OF C-60 CRYSTALS POLYMERIZED UNDER HIGH PRESSURE
MOLECULAR CRYSTALS AND LIQUID CRYSTALS SCIENCE AND TECHNOLOGY SECTION C-MOLECULAR MATERIALS 10(1-4), 119-124 (1998)
227. BASHKIN, IO; KOLESNIKOV, AI; ANTONOV, VE; PONYATOVSKY, EG; KOBZEV, AP; MUZYCHKA, AY; MORAVSKY, AP; WAGNER, FE; GROSSE, G.
VIBRATIONAL SPECTRA OF C-60 HYDROFULLERITE PREPARED UNDER HIGH HYDROGEN PRESSURE

- MOLECULAR CRYSTALS AND LIQUID CRYSTALS SCIENCE AND TECHNOLOGY SECTION C-MOLECULAR MATERIALS 10(1-4), 265-270 (1998)
228. ANTONOV, VE; CORNELL, K; FEDOTOV, VK; KOLESNIKOV, AI; PONYATOVSKY, EG; SHIRY, VI; WIPF, H. NEUTRON DIFFRACTION INVESTIGATION OF THE DHCP AND HCP IRON HYDRIDES AND DEUTERIDES JOURNAL OF ALLOYS AND COMPOUNDS 264(1-2), 214-222 (1998)
229. ROSS, DK; ANTONOV, VE; BOKHENKOV, EL; KOLESNIKOV, AI; PONYATOVSKY, EG; TOMKINSON, J. STRONG ANISOTROPY IN THE INELASTIC NEUTRON SCATTERING FROM PDH AT HIGH ENERGY TRANSFER PHYSICAL REVIEW B 58(5), 2591-2595 (1998)
230. PONYATOVSKY, EG; SINITSYN, VV; POZDNYAKOVA, TA. THE METASTABLE T-P PHASE DIAGRAM AND ANOMALOUS THERMODYNAMIC PROPERTIES OF SUPERCOOLED WATER JOURNAL OF CHEMICAL PHYSICS 109(6), 2413-2422 (1998)
231. TISSEN, VG; DEGTYAREVA, VF; NEFEDOVA, MV; PONYATOVSKII, EG; HOLZAPFEL, WB. SUPERCONDUCTIVITY AND CRYSTALLOGRAPHIC TRANSITIONS OF INBI UNDER PRESSURE JOURNAL OF PHYSICS-CONDENSED MATTER 10(33), 7303-7308 (1998)
232. PAL'NICHENKO, AV; PONYATOVSKII, EG; RED'KIN, BS; SINITSYN, VV. LOW-TEMPERATURE SPECIFIC HEAT OF CRYSTALLINE AND AMORPHOUS EU-2(MOO4)(3) JETP LETTERS 68(8), 657-661 (1998)
233. BASHKIN, IO; NEFEDOVA, MV; TISSEN, VG; PONYATOVSKII, EG. SUPERCONDUCTIVITY IN THE TI-D SYSTEM UNDER PRESSURE PHYSICS OF THE SOLID STATE 40(12), 1950-1952 (1998)
234. KOLESNIKOV, AI; ANTONOV, VE; BASHKIN, IO; LI, JC; MORAVSKY, AP; PONYATOVSKY, EG; TOMKINSON, J. NEUTRON SPECTROSCOPY OF FULLERITE HYDROGENATED UNDER HIGH PRESSURES PHYSICA B 263, 436-438 (1999)
235. CALVO-DAHLBORG, M; DAHLBORG, U; BARKALOV, OI; KOLESNIKOV, AI; PONYATOVSKY, EG; HANNON, AC. NEUTRON SCATTERING STUDY OF BULK AMORPHOUS GASB JOURNAL OF NON-CRYSTALLINE SOLIDS 244(2-3), 250-259 (1999)
236. PONYATOVSKY, EG; SINITSYN, VV. THERMODYNAMICS OF STABLE AND METASTABLE EQUILIBRIA IN WATER IN THE T-P REGION PHYSICA B-CONDENSED MATTER 265(1-4), 121-127 (1999)
237. KOLESNIKOV, AI; DAHLBORG, U; CALVO-DAHLBORG, M; BARKALOV, OI; PONYATOVSKY, EG; HOWELLS, WS; HARKUNOV, AI. NEUTRON-DIFFRACTION STUDY OF BULK AMORPHOUS AL32GE68 ALLOY PHYSICAL REVIEW B 60(18), 12681-12686 (1999)
238. BASHKIN, IO; FEDOTOV, VK; HESSE, HJ; SCHIWEK, A; HOLZAPFEL, WB; PONYATOVSKY, EG. A SYNCHROTRON STUDY OF HIGH-PRESSURE TRANSFORMATIONS IN TIH0.74 HIGH PRESSURE RESEARCH 17(3-6), 217-224 (2000)
239. BASHKIN, IO; ANTONOV, VE; OSSIPYAN, YA; PONYATOVSKY, EG; MORAVSKY, AP; SHULGA, YM; MOROZOV, YG. MAGNETIC PROPERTIES OF HIGH-PRESSURE HYDROGENATED AND POLYMERIC FULLERITES MOLECULAR MATERIALS 13(1-4), 263-268 (2000)
240. BASHKIN, IO; ANTONOV, VE; KOLESNIKOV, AI; PONYATOVSKY, EG; MAYERS, J; PARKER, SF; TOMKINSON, J; MORAVSKY, AP; SHULGA, YM. HYDROGEN IN THE VIBRATIONAL SPECTRA OF HIGH-PRESSURE HYDROFULLERITE MOLECULAR MATERIALS 13(1-4), 251-256 (2000)
241. KOLESNIKOV, AI; ADAMS, MA; BASHKIN, IO; PONYATOVSKY, EG. HYDROGEN VIBRATIONS IN GAMMA-TIH AND GAMMA-ZRH UNDER HIGH PRESSURE HIGH PRESSURE RESEARCH 17(3-6), 281-288 (2000)
242. ANTONOV, VE; BARKALOV, OI; CALVO-DAHLBORG, M; DAHLBORG, U; FEDOTOV, VF; HARDUNOV, AI; HANSEN, T; PONYATOVSKY, EG; WINZENICK, M.

- PHASE TRANSFORMATIONS OF THE AMORPHOUS ZN-SB ALLOY UNDER HIGH PRESSURES
HIGH PRESSURE RESEARCH 17(3-6), 261-272 (2000)
243. PONYATOVSKY, EG.
NEUTRON SCATTERING STUDY OF HIGH-PRESSURE PHASES OBTAINED BY THERMOBARIC TREATMENT
HIGH PRESSURE RESEARCH 17(3-6), 157-170 (2000)
244. BASHKIN, IO; PAGNUEV, AY; GUROV, AF; FEDOTOV, VK; ABROSIMOVA, GE; PONYATOVSKII, EG.
PHASE TRANSFORMATIONS IN EQUIATOMIC ALLOY TiZr AT PRESSURE UP TO 70 KBAR
PHYSICS OF THE SOLID STATE 42(1), 170-176 (2000)
245. TISSEN, VG; PONYATOVSKII, EG; NEFEDOVA, MV; LAUKHIN, V; MARTINEZ, B; FONTCUBERTA, J; ARSENOV, AA; MUKOVSKII, YM.
CHARGE ORDERING AND PHASE TRANSFORMATIONS IN LOW-DOPED La_{1-x}Sr_xMnO₃ SINGLE CRYSTALS UNDER PRESSURES UP TO 70 KBAR
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 211(1-3), 145-149 (2000)
246. ANTONOV, VE; BARKALOV, OI; FEDOTOV, VK; HARKUNOV, AI; KOLYUBAKIN, AI; PONYATOVSKY, EG; WINZENICK, M.
REVERSIBLE PHASE TRANSITION BETWEEN AMORPHOUS PHASES IN A BULK ZN-SB ALLOY UNDER HIGH PRESSURES
PHYSICAL REVIEW B 62(5), 3130-3135 (2000)
247. KOLESNIKOV, AI; BARKALOV, OI; CALVO-DAHLBORG, M; DAHLBORG, U; HOWELLS, WS; PONYATOVSKY, EG.
NEUTRON DIFFRACTION AND REVERSE MONTE CARLO STUDY OF BULK AMORPHOUS GA₃₈SB₃₈GE₂₄ ALLOYS
PHYSICAL REVIEW B 62(14), 9372-9377 (2000)
248. SINITSYN, VV; BARANOV, A; PONYATOVSKY, EG.
PRESSURE EFFECT ON SUPERPROTONIC PHASE TRANSITION IN MIXED [(NH₄)_xRb_{1-x}]₃H(SO₄)₂ CRYSTALS
SOLID STATE IONICS 136, 167-171 (2000)
249. BASHKIN, IO; TISSEN, VG; NEFEDOVA, MV; SCHIWEK, A; HOLZAPFEL, WB; PONYATOVSKY, EG.
ENHANCED SUPERCONDUCTIVITY OF THE Ti-Zr ALLOYS IN THE HIGH-PRESSURE BCC PHASE
JETP LETTERS 73(2), 75-78 (2001)
250. DOLGOPOLOV, VT; EREMENKO, VV; KVEDER, VV; KLASSEN, NV; KOSEVICH, AM; KULAKOVSKII, VD; LEVCHENKO, AA; MANZHELII, VG; MEZHOV-DEGLYN, AP; NATSIK, VD; PONYATOVSKII, EG; ROMANOV, YM; SUVOROV, EV; TSOI, VS; SHEKTMAN, VS; SHIKIN, VB.
YURII ANDREEVICH OSIP'YAN (ON HIS 70TH BIRTHDAY)
LOW TEMPERATURE PHYSICS 27(2), 162-163 (2001)
251. SINITSYN, VV; PONYATOVSKY, EG; KOLESNIKOV, AI; DAHLBORG, U; CALVO-DAHLBORG, M.
THERMODYNAMIC PROPERTIES AND STRUCTURAL FEATURES OF WATER AT NORMAL AND HIGH PRESSURES
SOLID STATE IONICS 145(1-4), 415-420 (2001)
252. PONYATOVSKII, EG; ABROSIMOVA, GE; ARONIN, AS; KULAKOV, VI; KULESHOV, IV; SINITSYN, VV.
NANOCRYSTALLINE Cu₂O PREPARED UNDER HIGH PRESSURES
PHYSICS OF THE SOLID STATE 44(5), 852-856 (2002)
253. ANTONOV, VE; BASHKIN, IO; KHASANOV, SS; MORAVSKY, AP; MOROZOV, YG; SHULGA, YM; OSSIPYAN, YA; PONYATOVSKY, EG.
MAGNETIC ORDERING IN HYDROFULLERITE C₆₀H₂₄
JOURNAL OF ALLOYS AND COMPOUNDS 330, 365-368 (2002)
254. BASHKIN, IO; FEDOTOV, VK; HESSE, HJ; SCHIWEK, A; HOLZAPFEL, WB; PONYATOVSKY, EG.
AN IN SITU STRUCTURAL STUDY OF THE HIGH-PRESSURE TRANSFORMATIONS IN TiH_{0.74}
JOURNAL OF PHYSICS-CONDENSED MATTER 14(5), 955-966 (2002)
255. ANTONOV, VE; BAIER, M; DORNER, B; FEDOTOV, VK; GROSSE, G; KOLESNIKOV, AI; PONYATOVSKY, EG; SCHNEIDER, G; WAGNER, FE.
HIGH-PRESSURE HYDRIDES OF IRON AND ITS ALLOYS
JOURNAL OF PHYSICS-CONDENSED MATTER 14(25), 6427-6445 (2002)

256. ANTONOV, VE; BARKALOV, OI; FEDOTOV, VK; HARKUNOV, AI; PONYATOVSKY, EG.
PHASE TRANSFORMATIONS OF AMORPHOUS SEMICONDUCTOR ALLOYS UNDER HIGH PRESSURES
JOURNAL OF PHYSICS-CONDENSED MATTER 14(44), 11213-11221 (2002)
257. BASHKIN, IO; NEFEDOVA, MV; PONYATOVSKY, EG; TISSEN, VG.
INCREASE IN THE SUPERCONDUCTING TRANSITION TEMPERATURE IN ZR-HF ALLOYS DUE TO S-D
ELECTRON TRANSFER UNDER PRESSURE
JETP LETTERS 78(2), 80-83 (2003)
258. DMITRIEV, V; SINITSYN, V; DILANIAN, R; MACHON, D; KUZNETSOV, A; PONYATOVSKY, E; LUCAZEAU,
G; WEBER, HP.
IN SITU PRESSURE-INDUCED SOLID-STATE AMORPHIZATION IN SM-2(MOO4)(3), EU-2(MOO4)(3)
AND GD-2(MOO4)(3) CRYSTALS: CHEMICAL DECOMPOSITION SCENARIO
JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS 64(2), 307-312 (2003)
259. BASHKIN, IO; FEDOTOV, VK; NEFEDOVA, MV; TISSEN, VG; PONYATOVSKY, EG; SCHIWEK, A;
HOLZAPFEL, WB.
CRYSTAL STRUCTURE AND SUPERCONDUCTIVITY OF TIZR UP TO 57 GPA
PHYSICAL REVIEW B 68(5), - (2003)
260. PONYATOVSKY, EG.
A THERMODYNAMIC APPROACH TO T-P PHASE DIAGRAMS OF SUBSTANCES IN LIQUID AND
AMORPHOUS STATES
JOURNAL OF PHYSICS-CONDENSED MATTER 15(36), 6123-6141 (2003)
261. MACHON, D; SINITSYN, VV; DMITRIEV, VP; BDIKIN, IK; DUBROVINSKY, LS; KULESHOV, IV;
PONYATOVSKY, EG; WEBER, HP.
STRUCTURAL TRANSITIONS IN CU₂O AT PRESSURES UP TO 11 GPA
JOURNAL OF PHYSICS-CONDENSED MATTER 15(43), 7227-7235 (2003)
262. BAZHENOV, AV; FURSOVA, TN; ANTONOV, VE; BASHKIN, IO; HARKUNOV, AL; PONYATOVSKY, EG.
INFRARED SPECTRA OF HYDROGENATED C-60, CARBON NANOTUBES, AND NANOFIBERS
FULLERENES NANOTUBES AND CARBON NANOSTRUCTURES 12(1-2), 293-296 (2004)
263. BASHKIN, IO; ANTONOV, VE; BAZHENOV, AV; BDIKIN, IK; BORISENKO, DN; KRINICHNAYA, EP;
MORAVSKY, AP; HARKUNOV, AI; SHUL'GA, YM; OSSIPYAN, YA; PONYATOVSKY, EG.
THERMALLY STABLE HYDROGEN COMPOUNDS OBTAINED UNDER HIGH PRESSURE ON THE BASIS OF
CARBON NANOTUBES AND NANOFIBERS
JETP LETTERS 79(5), 226-230 (2004)
264. SHULGA, YM; BASHKIN, IO; KRESTININ, AV; MARTYNENKO, VM; ZVEREVA, GI; KONDRATIEVA, IV;
OSSIPYAN, YA; PONYATOVSKY, EG.
SPECTRUM OF GASES LIBERATED UPON THE STEPWISE HEATING OF SINGLE-WALLED CARBON
NANOTUBES DEUTERATED UNDER PRESSURE
JETP LETTERS 80(12), 752-756 (2004)
265. SINITSYN, VV; DMITRIEV, VP; BDIKIN, IK; MACHON, D; DUBROVINSKY, L; PONYATOVSKY, EG;
WEBER, HP.
AMORPHIZATION OF CUPRITE, CU₂O, DUE TO CHEMICAL DECOMPOSITION UNDER HIGH PRESSURE
JETP LETTERS 80(11), 704-706 (2004)
266. BASHKIN, IO; NEFEDOVA, MV; TISSEN, VG; PONYATOVSKY, EG.
SUPERCONDUCTING TRANSITION TEMPERATURE IN HAFNIUM UNDER PRESSURES UP TO 64 GPA
JETP LETTERS 80(10), 655-657 (2004)
267. SHMYT'KO, IM; KUDRENKO, EA; SINITSYN, VV; RED'KIN, BS; PONYATOVSKY, EG.
FEATURES OF THE PRESSURE-INDUCED PHASE TRANSITIONS IN EU-2(MOO4)(3) SINGLE CRYSTALS
JETP LETTERS 82(7), 409-412 (2005)
268. SHMURAK, SZ; KISELEV, AP; SINITSYN, VV; SHMIT'KO, IM; ARONIN, AS; RED'KIN, BS; PONYATOVSKII,
EG.
OPTICAL SPECTROSCOPY OF EUROPIUM MOLYBDATE IN THE CRYSTALLINE AND AMORPHOUS
STATES
PHYSICS OF THE SOLID STATE 48(1), 51-57 (2006)
269. BASHKIN, IO; TISSEN, VG; NEFEDOVA, MV; PONYATOVSKY, EG.
SUPERCONDUCTING TRANSITION TEMPERATURE OF THE EQUIATOMICZRNb ALLOY AT PRESSURES

- TO 56.4 GPA
 PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS 434(2), 191-193 (2006)
270. KISELEV, AP; SHMURAK, SZ; RED'KIN, BS; SINITSYN, VV; SHMYT'KO, IM; KUDRENKO, EA; PONYATOVSKII, EG.
 EVOLUTION OF THE SPECTRAL RESPONSE OF AMORPHOUS EUROPIUM MOLYBDATE UNDER ANNEALING
 PHYSICS OF THE SOLID STATE 48(8), 1544-1552 (2006)
271. DMITRIEV, VP; DUBROVINSKY, L; LE BIHAN, T; KUZNETSOV, A; WEBER, H-P; PONIATOVSKY, EG.
 COLLAPSED HEXAGONAL OMEGA PHASE IN A COMPRESSED TIZR ALLOY: ANGLE-DISPERSIVE SYNCHROTRON-RADIATION X-RAY DIFFRACTION STUDY
 PHYSICAL REVIEW B 73(9), - (2006)
272. BASHKIN, IO; TISSEN, VG; NEFEDOVA, MV; PONYATOVSKY, EG.
 SUPERCONDUCTING TEMPERATURE OF THE OMEGA-PHASE IN TI, ZR AND HF METALS AT HIGH PRESSURES
 PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS 453(1-2), 12-14 (2007)
273. SHMYT'KO, IM; KUDRENKO, EA; SINITSYN, VV; RED'KIN, BS; PONYATOVSKII, EG.
 STRUCTURAL ASPECTS OF SOLID-STATE AMORPHIZATION IN EU-2(MOO4)(3) SINGLE CRYSTALS
 PHYSICS OF THE SOLID STATE 49(5), 941-948 (2007)
274. KISELEV, A.P.; SHMURAK, S.Z.; SINITSYN, V.V.; KHASANOV, S.S.; RED'KIN, B.S.; ALEKSEEV, A.V.; PONYATOVSKII, E.G..
 SPECTROSCOPY AND X-RAY DIFFRACTION ANALYSIS OF EUROPIUM MOLYBDATE SINGLE CRYSTALS SUBJECTED TO DIFFERENT THERMOBARIC TREATMENTS
 BULLETIN OF THE RUSSIAN ACADEMY OF SCIENCES. PHYSICS 72(9), 1297 (2008)
275. KUDRENKO, EA; SHMYT'KO, IM; SINITSYN, VV; PONYATOVSKY, EG; RED'KIN, BN.
 STRUCTURAL STATE OF EU-2(MOO4)(3) SINGLE CRYSTAL AFTER DIFFERENT THERMOBARIC TREATMENTS
 ZEITSCHRIFT FUR KRISTALLOGRAPHIE , 205-210 (2008)
276. BASHKIN, IO; SHESTAKOV, VV; SAKHAROV, MK; FEDOTOV, VK; PONYATOVSKII, EG.
 DECOMPOSITION OF A SOLID SOLUTION IN THE OMEGA PHASE OF THE TI-ZR SYSTEM UNDER HIGH PRESSURE
 PHYSICS OF THE SOLID STATE 50(7), 1337-1341 (2008)
277. FEDOTOV, VK; BARKALOV, OI; PONYATOVSKY, EG; CALVO-DAHLBORG, M; DAHLBORG, U; HANSEN, T.
 SOLID-STATE AMORPHIZATION OF A QUENCHED HIGH-PRESSURE GASB PHASE STUDIED BY REAL-TIME NEUTRON DIFFRACTION: EVOLUTION OF THE CRYSTALLINE PHASE
 JOURNAL OF PHYSICS-CONDENSED MATTER 21(4), - (2009)
278. BASHKIN, IO; TISSEN, VG; NEFEDOVA, MV; PONYATOVSKII, EG.
 TEMPERATURE OF THE SUPERCONDUCTING TRANSITION IN THE TIV ALLOY AT PRESSURES UP TO 60.8 GPA
 PHYSICS OF THE SOLID STATE 51(2), 241-243 (2009)
279. PONYATOVSKII, EG; BASHKIN, IO; TISSEN, VG; NEFEDOVA, MV.
 SUPERCONDUCTIVITY OF VANADIUM AND VANADIUM-TITANIUM ALLOYS AT HIGH PRESSURE
 JETP LETTERS 89(5), 253-255 (2009)
280. PONYATOVSKY, EG; BASHKIN, IO; TISSEN, VG; NEFEDOVA, MV.
 SUPERCONDUCTIVITY OF BCC ZR AND ZR-NB ALLOYS AT HIGH PRESSURES
 PHYSICS OF THE SOLID STATE 51(9), 1785-1788 (2009)
281. TISSEN, VG; PONYATOVSKY, EG; NEFEDOVA, MV; TITOV, AN; FEDORENKO, VV.
 EFFECTS OF PRESSURE-INDUCED PHASE TRANSITIONS ON SUPERCONDUCTIVITY IN SINGLE-CRYSTAL FE1.02SE
 PHYSICAL REVIEW B 80(9), - (2009)
282. FEDOTOV, VK; PONYATOVSKY, EG.
 STUDY OF THE SOLID-STATE AMORPHIZATION OF (GASB)(1-X)GE (X) SEMICONDUCTORS BY REAL-TIME NEUTRON DIFFRACTION AND ELECTRON MICROSCOPY
 CRYSTALLOGRAPHY REPORTS 56(7), 1155-1159 (2011)

283. WILLINGER, E; SINITSYN, V; KHASANOV, S; REDKIN, B; SHMURAK, S; PONYATOVSKY, E.
ORIGIN OF "MEMORY GLASS" EFFECT IN PRESSURE-AMORPHIZED RARE-EARTH MOLYBDATE SINGLE
CRYSTALS
JOURNAL OF SOLID STATE CHEMISTRY 222, 1-6 (2015)
284. SINITSYN, VV; REDKIN, BS; KISELEV, AP; SHMURAK, SZ; KOLESNIKOV, NN; KVEDER, VV;
PONYATOVSKY, EG.
"WHITE" PHOSPHOR ON THE BASIS OF $Gd_2(MoO_4)_3$: TM, TB, EU SINGLE CRYSTAL
SOLID STATE SCIENCES 46, 80-83 (2015)