Curriculum vitae
Dr. Sergiu SHOVA
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Education

1980-1983	PhD (Chemistry), The Institute for Applied Physics of Moldova Academy of Sciences, str. Academiei 3, Chişinău MD-2028, R. Moldova, supervisor Prof. Yu. Simonov
2003-2005	Posdoctoral training (Synthesis, crystal structure and physical properties of iron(II) spin crossover compounds), Laboratoire de Chimie de Coordination du CNRS, UPR 8241, 205 route de Narbonne,31077 Toulouse Cedex, France, (Prof. Jean-Pierre Tuchagues)

Academic work experience

1984-present	Associate Professor (Inorganic chemistry, crystallography and structural analysis with X-rays), State University of Moldova, str. A Mateevici Nr. 60, MD-2004 Chişinău, R. Moldova
1996-2010	Coordinating Science Researcher (Management of X-ray analysis laboratory), The Institute for Applied Physics of Moldova Academy of Science, str. Academiei 3, Chişinău MD-2028, R. Moldova
2006-2010	Head of testing Laboratory, (The Management and accreditation procedure of testing laboratory), Moldavian-Germany Company „Bio-Company-Raps", str. Jukowski 79, or. Lipcani, R. Moldova
2009–2015	Coordinating Science Researcher, (The Management of the Laboratory for analysis of toxic substances), The Zoology Institute of Moldova Academy of Science, The Laboratory for Hydrobiology and Ecotoxicology, str. Academiei 3, Chişinău MD-2028, R. Moldova
2010- present	Senior Researcher II (X-ray Laboratory Management), "Petru Poni" Institute of Macromolecular Chemistry, alley Grigore Ghica Voda, no. 41-A, postcode 700487, Iasi, Romania

Research interests - *coordination chemistry*: synthesis, physical methods, X-ray crystallography.

Skills Inorganic and coordination Chemistry, X-ray analysis, Crystallography, Cristallochemistry.

Contributions, Mentorship and Communications: • over 470 scientific papers and 10 patents; • implemented 5 national and 2 international (INTAS and Horizon 2020) projects; • Trained and mentored students with different research backgrounds; • h-index: 33 (Web of Science); • citations: over 6000 citations (Web of Science, over 5000 without self-citation).

Most relevant research articles in the last five years (49 Q1, 41 Q2)

2023

1. A Manganese (II) 3D Metal–Organic Framework with Siloxane-Spaced Dicarboxylic Ligand: Synthesis, Structure, and Properties, **A.C. Stoica, M. Damoc, S. Shova**, G. Novitchi, **M. Dascalu**, **M. Cazacu**, *Inorganics*, Volumul 11, 1, 21, https://doi.org/10.3390/inorganics11010021 (2023), (FI_{2022} = 3.149) (Q1)
2. Micellization Turned on Dual Fluorescence and Room Temperature Phosphorescence by Pseudo-ESIPT in Thiadiazole Derivatives, **M. Damoc**, R. I. Tigoianu, **A.C. Stoica, A.M. Macsim, M. Dascalu, S. Shova, M. Cazacu**., *Journal of Physical Chemistry C.* 127(1), 99–109, https://doi.org/10.1021/acs.jpcc.2c07651 , (2023), (FI2022 = 3.7) (Q1).
3. Crystal structures of 5-bromo-1-arylpyrazoles and their halogen bonding features, M. M. Popa, **S. Shova, M. Dascalu**, M. R. Caira, F. Dumitrascu, https://doi.org/10.1039/D2CE01355J, *CrystEngComm*, 25, 86-94, (2023), (FI_{2022} = 3.756) (Q1)

4. 1,3-Dipolar cycloaddition of cycloimmonium salts and 4-(trimethylsilyl)-3-butyn-2-one to access new functionalized indolizines with potential cytostatic activity, A. Zubas, A. Ghinet, **S. Shova**, E. Bicu, *New Journal of Chemistry*, https://doi.org/10.1039/D2NJ05257A (2023), (FI_{2022} = 3.925) (Q1)

5. Synthesis and Antimicrobial Activity Evaluation of Homodrimane Sesquiterpenoids with a Benzimidazole Unitquiterpenoids with a Benzimidazole Unit, L. Lungu, S. Blaja, C. Cucicova, A. Ciocarlan, A. Barba, V. Kulcițki, **S. Shova**, N. Vornicu, E.-I. Geana, I.I. Mangalagiu, A. Aricu, *Molecules* 28(3), 933, https://doi.org/10.3390/molecules28030933, (2023) (FI_{2022} = 4.927) (Q2)

6. How Metal Nuclearity Impacts Electrocatalytic H2 Production in Thiocarbohydrazone-Based Complexes, M. Papadakis, A. Barrozo, L. Delmotte, T. Straistari, **S. Shova**, M. Reglier, V. Krewald, S. Bertaina, R. Hardre, M. Orio, *Inorganics* 11(4), 149, https://doi.org/10.3390/inorganics11040149 , (2023), (FI_{2022} = 3.149) (Q1)

7. A Chain of Vertex-Sharing {CoIII2CoII2}n Squares with Single-Ion Magnet Behavior, M. G. Alexandru; D. Visinescu; **S. Shova**; J. Cano; N. Moliner; F. Lloret; M. Julve, Magnetochemistry 9(5), 130; https://doi.org/10.3390/magnetochemistry9050130, (2023), (FI_{2022} = 2.7) (Q2)

8. The role of halogen bonding in the interaction landscape directing the crystal packing in a homologous series of halogenated coumarin derivatives, M.M. Popa, D.G. Dumitrescu, **S. Shova**, I. Man, A. Van der Lee, F. Dumitrascu, *Journal of Molecular Structure* 1292, 136112, https://doi.org/10.1016/j.molstruc.2023.136112 (2023), (FI_{2022} = 3.8) (Q2)

9. Novel antimicrobial iodo-dihydro-pyrrole-2-one compounds, C.M. Al-Matarneh, A. Nicolescu, A; I.C. Marinas, M.C. Chifiriuc, **S. Shova**, M. Silion, M. Pinteala, *Future Medicinal Chemistry*, 15(15), https://doi.org/10.4155/fmc-2023-0121 , (2023),), (FI_{2022} = 4.2) (Q1)

10. New betulin imine derivatives with antioxidant and selective antitumor activity, M.M. Iftime, G.L., Ailiesei, **S. Shova**, C. Miron, H. Tanaka, M. Hori, L. Marin, *New Journal of Chemistry* 47(35), 16551-16563, https://doi.org/10.1039/D3NJ02738D , (2023), (FI_{2022} = 3.3) (Q2)

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12. Large ordered moment with strong easy-plane anisotropy and vortex-domain pattern in the kagome ferromagnet Fe_3Sn, L. Prodan, D.M. Evans, S.M. Griffin, A. Ostlin, M. Altthaler, E. Lysne, I.G. Filippova, **S. Shova**, L. Chioncel, V. Tsurkan, I. Kezsmarki, *Applied Physics Letters* 123 (2), 021901, https://doi.org/10.1063/5.0155295 , (2023), (FI_{2022} = 3.971) (Q1)

13. Synthesis, Characterization and Cytotoxic Evaluation of New Pyrrolo[1,2-b]pyridazines Obtained via Mesoionic Oxazolo-Pyridazinones, B.C. Ivan, S.F. Barbuceanu, C.M. Hotnog, O.T. Olaru, A.I. Anghel, R.V. Ancuceanu, M.A. Mihaila, L.I. Brasoveanu, **S. Shova**, C. Draghici, G.M. Nitulescu, F. Dumitrascu, *International Journal of Molecular Sciences* 24(14), 11642, https://doi.org/10.3390/ijms241411642 , (2023), (FI_{2022} = 5.6) (Q1)

14. Synthesis, characterization and antiproliferative activity of platinum (II) complexes with 3-(2-pyridyl)-N1, 2-methyl-1, 2, 4-triazoles, Y. M. Ohorodnik, D.M. Khomenko, R.O. Doroshchuk, I. V. Raspertova, **S. Shova**, M. V Babak, M. NM. Milunovic, R.D. Lampeka, *Inorganica Chimica Acta*, 556, 121646, https://doi.org/10.1016/j.ica.2023.121646 , (2023), (FI_{2022} = 3.118) (Q2).

15. Synthesis, characterization and magnetochemical study of cobalt, nickel and manganese coordination polymers, O. Cuzan, **S. Shova**, G. Novitchi, V. Lozan, *Inorganica Chimica Acta* 553, 121526, https://doi.org/10.1016/j.ica.2023.121526 , (2023), (FI_{2022} = 2.8) (Q2).

16. Quantum dots assembled from an aziridinium based hybrid perovskite displaying tunable luminescence, O. A. Semenikhin, O. I. Kucheriv, L. Sacarescu, **S. Shova**, I. A. Gural'skiy, *Chemical Communications* 59(24), 3566-3569, https://doi.org/10.1039/D2CC06791A , (2023), (FI_{2022} = 4.9) (Q1).

17. Novel Strigolactone Mimics That Modulate Photosynthesis and Biomass Accumulation in Chlorella sorokiniana, D. G. Popa, F. Georgescu, F. Dumitrascu, **S. Shova**, D. Constantinescu-Aruxandei, C. Draghici, L. Vladulescu, F. Oancea, *Molecules* 28 (20), https://doi.org/10.3390/molecules28207059 , (2023), (FI_{2022} = 4.6) (Q1).

18. Synthesis, Characterization and Cytotoxic Evaluation of New Pyrrolo[1,2-b]pyridazines Obtained via Mesoionic Oxazolo-Pyridazinones, B.-C. Ivan; S.-F. Barbuceanu, C. M. Hotnog, O. T. Olaru, A. I. Anghel, R. V. Ancuceanu, M. A. Mihaila, L. I. Brasoveanu, **S. Shova**, C. Draghici, G.M. Nitulescu, F. Dumitrascu, *International Journal of Molecular Sciences* 24(14), 11642, https://doi.org/10.3390/ijms241411642 , (FI_{2022} = 5.6) (Q1)

19. How Metal Nuclearity Impacts Electrocatalytic H2 Production in Thiocarbohydrazone-Based Complexes, M. Papadakis, A. Barrozo, L. Delmotte, T. Straistari, **S. Shova**, M. Réglier, V. Krewald, S. Bertaina, R. Hardré, M. Orio, *Inorganics* 11(4), 149, https://doi.org/10.3390/inorganics11040149 , (FI_{2022} = 2.9) (Q2)

2022

1. Octakis(carboxyalkylthioethyl)silsesquioxanes and derived metal complexes: Synthesis, characterization and catalytic activity assessments; **M. Dascalu, A.C. Stoica, A. Bele,** A.M. Macsim**, A, Bargan,** C.D. Varganici, **G.T. Stiubianu, C.Racles, S.**

Shova, M. Cazacu; *J Inorg Organomet Polym Mater* 32, 3955-3970 (2022) https://doi.org/10.1007/s10904-022-02408-8 (FI_{2021} = 3.518) (Q2)

2. Bentonite as an active natural filler for silicone leading to piezoelectric-like response material; **M. Iacob,** V. Tiron, **G.T. Stiubianu, M. Dascalu**, L. Hernandez, C.D. Varganici, **C. Tugui, M. Cazacu**; *J. Mater. Res. Technol*. 17, 79-94 (2022) https://doi.org/10.1016/j.jmrt.2021.12.125 (FI_{2021} = 6.267) (Q1)

3. Some theoretical and experimental evidence for particularities of the siloxane bond; **A.C. Stoica, M. Damoc**, C. Cojocaru, A. Nicolescu, **S. Shova, M. Dascalu, M. Cazacu**; *Molecules*- acceptata (2022) (FI_{2021} = 4.927) (Q2)

4. 2D coordination polymers and ionic complexes of the nickel(II) and zinc(II) cyclam cations with trigonal carboxylate linkers based on triazine core. Crystal structures, supramolecular catenation and spectral characterization, R.I. Gurtovyi, S.P. Gavrish, L.V. Tsymbal, M.O. Apostu, **M. Cazacu, S. Shova,** Y.D. Lampeka, *Polyhedron*, 221, 115870, https://doi.org/10.1016/j.poly.2022.115870 , (FI_{2021} = 2.88) (Q2)

5. Mesitylene Tribenzoic Acid as a Linker for Novel Zn/Cd Metal-Organic Frameworks, D. Bejan, I.-A. Dascalu, **S. Shova**, A. F. Trandabat, L. G. Bahrin, *Materials* (2022), 15(12), 4247; https://doi.org/10.3390/ma15124247 , (FI_{2021} = 3.62) (Q2)

6. Aziridinium cation templating 3D lead halide hybrid perovskites, H.R. Petrosova, O.I. Kucheriv, **S. Shova,** I.A. Gural'skiy, *Chemical Communications*, (2022), 58, 5745-5748, https://doi.org/10.1039/D2CC01364A , (FI_{2021} = 6.222) (Q2)

7. Four-step spin crossover in a new cyano-bridged iron-silver coordination polymer, O.I. Kucheriv, S.I. Shylin, V.Y. Sirenko, V. Ksenofontov, W. Tremel, I.A. Dascălu, S. Shova, I.A. Gural'skiy, Chemistry A European Journal, Accepted article, https://doi.org/10.1002/chem.202200924 , (FI_{2021} = 5.236) (Q2)

8. New Cyanido-Bridged Complexes of Zn(II) and/or Ag(I) with TPymT and Tptz Ligands: Synthesis, Structural and Fluorescent Properties, D. Visinescu; **S. Shova**; D.-L. Popescu; M.-G. Alexandru, *Crystals*, (2022), https://doi.org/10.3390/cryst12111618 (FI_{2021} = 2.670) (Q2)

9. Crystal structures of 5-bromo-1-arylpyrazoles and their halogen bonding features; M.M. Popa, **S. Shova, M. Dascalu**, M.R. Caira, F. Dumitrascu; *CrystEngComm- acceptata* (2022) (FI_{2021} = 3.756) (Q1)

10. 1D iron(ii)-1,2,4-triazolic chains with spin crossover assembled from discrete trinuclear complexes, S.I. Shylin, S. **Shova,** H.J. Shepherd, V. Ksenofontov, W. Tremel, I.A. Gural'skiy, *Dalton Transactions*, (2022), 51, 2364-2369, https://doi.org/10.1039/D2DT00004K ,(FI_{2021} = 4.390) (Q1)

11. Diastereomeric dinickel(ii) complexes with non-innocent bis(octaazamacrocyclic) ligands: isomerization, spectroelectrochemistry, DFT calculations and use in catalytic oxidation of cyclohexane, A. Dobrov, D. Darvasiová, M. Zalibera, L. Bučinský, I. Jelemenská, P. Rapta, **S. Shova,** D.G. Dumitrescu, M.A. Andrade, L.M.D.R.S.Martins, A.J.L. Pombeiro, V.B. Arion, *Dalton Transactions*, (2022), 51, 5151-5167, https://doi.org/10.1039/D2DT00154C ,(FI_{2021} = 4.390) (Q1)

12. Chiral 2D organic-inorganic hybrid perovskites based on L-histidine, V. Sirenko, O. I. Kucheriv, E. Gumienna-Kontecka, I. A. Gural'skiy, **S. Shova**, *Dalton Transactions* 43, 51, 16536-16544 (2022), https://doi.org/10.1039/D2DT03025J, ,(FI_{2021} = 4.390) (Q1)

13. Investigation by Chemical Substitution within 2p-3d-4f Clusters of the Cobalt(II) Role in the Magnetic Behavior of [vdCoLn]2 (vd = Verdazyl Radical), G. Novitchi, S. Shova, C. Train, *Inorganic Chemistry* 61(43), October (2022), https://doi.org/10.1021/acs.inorgchem.2c01742, (FI_{2021} = 5.165) (Q1)

14. Two-Step Spin Crossover in Hofmann-Type Coordination Polymers [Fe(2-phenylpyrazine)2{M(CN)2}2] (M = Ag, Au), V.M. Hiiuk, S.I. Shylin, D.D. Barakhtii, D.M. Korytko, V.O. Kotsyubynsky, A. Rotaru, **S. Shova**, I.A. Gural'skiy, *Inorganic Chemistry* 61, 4, 2093–2104, (2022), https://doi.org/10.1021/acs.inorgchem.1c03302 , (FI=5,436) (Q1)

15. Cooperative Spin Crossover above Room Temperature in the Iron(II) Cyanoborohydride–Pyrazine Complex, Y. S. Bibik, **S. Shova**, A. Rotaru, S. I. Shylin, I. O. Fritsky, R. D. Lampeka, I. A. Gural'skiy**,** *Inorg. Chem.* 61, 37, 14761–14769, (2022), https://doi.org/10.1021/acs.inorgchem.2c02177, (FI_{2021} = 5.165) (Q1)

16. Highly Porous Cyanometallic Spin-Crossover Frameworks Employing Pyridazino[4,5-d]pyridazine Bridge, V. M. Hiiuk; **S. Shova**; K. V. Domasevitch; I. A. Gural'skiy, *Inorganics*, 10(11), 195, (2022), https://doi.org/10.3390/inorganics10110195 , (FI_{2021} = 3.149) (Q1)

17. New Pyrrole Derivatives as Promising Biological Agents: Design, Synthesis, Characterization, In Silico, and Cytotoxicity Evaluation, B.-C. Ivan, S.-F. Barbuceanu, C. M. Hotnog, A. I. Anghel, R. V. Ancuceanu, M. A. Mihaila, L. I. Brasoveanu, **S. Shova**, C. Draghici, O.T. Olaru, G. M. Nitulescu, M. Dinu, F. Dumitrascu, *Int. J. Mol. Sci.* 2022, 23(16), 8854, (2022) ; https://doi.org/10.3390/ijms23168854, (2022) (FI_{2021} = 5.924) (Q1)

18. Solvatomorphism, polymorphism and spin crossover in bis[hydrotris(1,2,3-triazol-1-yl)borate]iron(II), Horniichuk, O., Ridier, K., Molnar,G., Kotsyubynsky, V., **Shova, S.**, Amirkhanov, V., Gural'skiy, I.A., Salmon, L., Bousseksou, A., *New Journal of Chemistry*, (2022), accepted for publication, https://doi.org/10.1039/D2NJ01471H ,(FI_{2021} = 3.591) (Q2)

2021

1. Dual crystalline-amorphous salen-metal complexes behave like nematic droplets with AIEgens vistas, **M. Damoc, A.C. Stoica, M. Dascalu**, M. Asandulesa, **S. Shova, M. Cazacu**, Dalton Trans., 50, 13841-13858, https://doi.org/10.1039/D1DT01980E, (2021), (FI_{2021} = 4.569) (Q1)
2. Silanol-functionalized tetranuclear copper complex and its nanoscale-heterogenization by immobilization on glass surface from solution, **A. C. Stoica, M. Damoc**, V. Tiron, **M. Dascalu**, A. Coroaba, **S. Shova, M. Cazacu**, Journal of Molecular Liquids, https://doi.org/10.1016/j.molliq.2021.117742 , (2021), (FI_{2021} = 6.633) (Q1)
3. 1-(4-Carboxyphenyl)-5-methyl-1H-1,2,3-triazole-4-carboxylic acid - A versatile ligand for the preparation of coordination polymers and mononuclear complexes, B.I. Bratanovici, **S. Shova**, V. Lozan, I.A. Dascălu, R. Ardeleanu, G. Roman, Polyhedron, 200, Article number: 115115, may 15, https://doi.org/10.1016/j.poly.2021.115115 (2021), (FI_{2021} = 2.975) (Q2)
4. Synthesis, crystal structure and luminescent properties of isoreticular lanthanide-organic frameworks based on a tetramethyl-substituted terphenyldicarboxylic acid, I.A. Dascalu, E.A. Mikhalyova, **S. Shova**, B.I. Bratanovici, R. Ardeleanu, N. Marangoci, V. Lozan, G. Roman, Polyhedron, 194, Article Number: 114929, https://doi.org/10.1016/j.poly.2020.114929, January 15 (2021), (FI_{2021} = 2.975) (Q2)
5. Slow relaxation of the magnetization in a {(CoMnIII)-Mn-III} heterometallic brick-wall network, M.G. Alexandru, D. Vișinescu, **S. Shova**, S.E. Stiriba, J. Cano, F. Lloret, M. Julve, Polyhedron, 200, Article Number:115118, may 15, https://doi.org/10.1016/j.poly.2021.115118 (2021), (FI_{2021} = 2.975) (Q2)
6. An alternative approach to the synthesis of [1,2,4]triazolo[1,5-a]pyridine-8-carbonitriles, their crystal structure, and DFT calculations, D.M. Khomenko, T.V. Shokol, R.O. Doroshchuk, V.S. Starova, I.V. Raspertova, **S. Shova**, R.D. Lampeka, Y.M. Volovenko, Journal of Heterocyclic Chemistry 58(6), 1278-1285, https://doi.org/10.1002/jhet.4256 , May (2021), (FI_{2021} = 2.035) (Q3)
7. An original 3D coordination polymer constructed from trinuclear nodes and tetracarboxylato spacers, A.S. Dinca, A. Dogaru, A.E. Ion, S. Nica, D. Dumitrescu, **S. Shova**, F. Lloret, M. Julve, A. Andruh, CRYSTENGCOMM, 23 (6), 1332-1335, DOI: 10.1039/d0ce01667e, 14 February, https://doi.org/10.1039/D0CE01667E (2021), (FI_{2021} = 2.035) (Q3)
8. Co (II), Cu (II), Mn (II), Ni (II), Pd (II), and Pt (II) complexes of bidentate Schiff base ligand: Synthesis, crystal structure, and acute toxicity evaluation, G. Lupascu, E. Pahontu, **S. Shova**, S.F. Barbuceanu, M. Badea, C. Paraschivescu, J. Neamtu, M. Dinu, R.V. Ancuceanu, D. Draganescu, C.E. Dinu-Pirvu, Applied Organometallic Chemistry, Article Number:e6149, https://doi.org/10.1002/aoc.6149, January (2021), (FI_{2021} = 4.072) (Q2)
9. Coordination Polymers of the Macrocyclic Nickel(II) and Copper(II) Complexes with Isomeric Benzenedicarboxylates: The Case of Spatial Complementarity between the Bis-Macrocyclic Complexes and o-Phthalate, L. V. Tsymbal, I. L. Andriichuk, **S. Shova**, D. Trzybiński, K. Woźniak, V. B. Arion, Y. D. Lampeka, Cryst. Growth Des. 21, 4, 2355–2370, March 16, https://doi.org/10.1021/acs.cgd.1c00011, (2021), (FI_{2021} = 4.076) (Q1)
10. Slow Magnetic Relaxation in {[CoCxAPy)] 2.15 H2O}(n) MOF Built from Ladder-Structured 2D Layers with Dimeric SMM Rungs, A. Arauzo, E. Bartolome, J. Luzon, P. Alonso, **A. Vlad, M. Cazacu, M.F. Zaltariov, S. Shova,** J. Bartolome, C. Turta, Molecules, 26 (18), Article Number 5626, https://doi.org/10.3390/molecules26185626, (2021), (FI_{2021} = 4.927) (Q2)
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13. Isomorphic Channel-Type Pseudopolymorphs of Azathioprine: From Structural Confirmations to a Rational Polymorph Screening Approach, D. Samohvalov, M.A. Lungan, **S. Shova**, A. Barbatu, D. Gherca, C.M. Manta, Crystal Growth&Design 21(9), 4837-4846, https://doi.org/10.1021/acs.cgd.0c01718 , (2021), (FI_{2021} = 4.076) (Q1).
14. An investigation of two copper(ii) complexes with a triazole derivative as a ligand: magnetic and catalytic properties, Y.P. Petrenko, K. Piasta, D.M. Khomenko, R.O. Doroshchuk, **S. Shova**, G. Novitchi, Y. Toporivska, E. Gumienna-Kontecka, LMDRS. Martins, R.S. Lampeka, RSC Advances, 11 (38), 23442-23449, Jul 14 2021, https://doi.org/10.1039/D1RA03107D , (2021), (FI_{2021} = 4.036) (Q2).
15. Synthesis and characterization of [4-{(CH_2O)(2)CH}C_6H_4](2)Hg, [4-(O=CH)C_6H_4](2)Hg and [(E)-4-(RN=CH)C_6H_4](2)Hg (R=2 '-py, 4 '-py, 2 '-pyCH(2), 4 '-pyCH(2)), L. Kiss, A. Pop, **S. Shova**, C.I. Rat, C. Silvestru, Applied Organometallic Chemistry 35(9), Article Number 6339, Sep, https://doi.org/10.1002/aoc.6339, (2021), (FI_{2021} = 4.105) (Q1).

2020

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