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SCIENTIFIC LITERATURE ON THE PROBLEMS OF LUMINESCENCE:

BIBLIOGRAPHY, 1935-1946.

Source: Nauchnaya Literatura po Voprosam Lyuminestsentsii /a 335-page paper-bound book/.

Compilators: V. V. Antonov-Romanovskiy (Dr of Phys-Math Sci)

T. O. Vreden-Kobetskaya (Main Librarian)

N. Ya. Rabinovich (Senior Librarian-Editor)

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SCIENTIFIC LITERATURE ON THE PROBLEMS OF LUMINESCENCE:

BIBLIOGRAPHY, 1935-1946

V. V. Antonov-Romanovskiy (Compilator)

/Note: The following is information taken from a bibliography on luminescence; namely, its:

1. Introduction, By Academician S. I. Vavilov
2. Note from the Compilators
3. Table of Contents
4. Alphabetical Index of Names and Titles /Only Russian/
5. List of Sources /Russian/
6. List of Articles on Luminescence /partial list/

Omitted here are foreign (non-Russian) names, titles, and articles.

The great majority of references given in the original Bibliography are non-Russian./

/Russian articles that are listed here as appearing in 'Comptes Rendus (Doklady) de l'Academie des Sciences de l'URSS' (abbreviated here CR) are usually in English./

1. Introduction, by Academician S. I. Vavilov /pp 3-4/

During the past 10 years the science of luminescence has indisputably acquired great significance in the most diverse departments of science and technics. For the physicist luminescence is one of the most effective means for studying in detail the structure of atoms, molecules and crystals. In the field of chemistry luminescence puts in the hands of the researcher an unusually sensitive method of analysis and a procedure for tracing still unobservable links in chemical reactions. The results of knowledge of luminescence are employed in astrophysics, particularly in the study of planetary nebulae. The deductions from the science of luminescence

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are being successfully applied in biology and medicine. It is sufficient for us, for example, to recall the phenomena of photosynthesis and investigations of blood. With each year the role of luminescence in illumination technology (luminescent lamps), in radar, in television, in defectoscopy, in the most diverse cases of "sorting analysis" /sortovoy analize/, in forensic medicine, etc becomes still more extensive.

Such interestedness of very diverse circles of specialists brings with itself extreme pulverization of the scientific literature. Articles on luminescence are published in physical, chemical, astronomical, electro-technical, geological, medical, and other journals. Several attempts to give a summary of existing extremely diverse information on luminescence in books on the practical applications of luminescence have turned out to be of little success. In essence, they cannot satisfy the specialist striving usually to find concrete information on individual problems.

A sufficiently detailed bibliography on the problems of luminescence can give essential help in such matters. Such a bibliographic index, compiled at the Physical Institute imeni P. N. Lebedev and encompassing the period from 1935-1946, should be called to the attention of persons interested in luminescence.

This Index does not pretend to completeness; in it are admittedly a number of notices of a popular or advertising character; which often appear in foreign journals. Undoubtedly there are also serious omissions, since not all publications in which are printed articles on luminescence have [redacted] reached the compilators.

It can be hoped, however, that this index of literature will be of considerable help even with these gaps.

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2. Note From the Compilators [page 5]

For the purpose of facilitating use of this bibliographic index of literature on problems of luminescence, the material of the latter is grouped according to similar divisions most of which are developed into a number of subdivisions. Seven divisions are made of the literature, which is grouped according to the various kinds of excitation of luminescence. Expecially, two divisions, in which patent literature is included, are devoted to the practical application of luminescence and to the manufacture of luminescing substances. The literature on methods of investigation is given in a special section.

The most general divisions according to the methods of exciting luminescence are expanded into subdivisions in accordance with the kind of phenomena investigated (absorption spectra, illumination and excitation, yield of luminescence, etc). The physico-chemical properties of luminescing substances are separately given.

The large subdivision on the application of luminescence, "Luminescence Analysis" is in its turn developed further into several subdivision, of which "Luminescence 'Sorting Analysis'" and "Luminescence Microscopy" contain also literature on bioluminescence.

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4. Alphabetical Index of Names and Titles [only Russian]

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6. V. N. Alyavdin
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11. F. S. Baryshanskaya
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14. A. V. Blagodatova
15. O. Blank
16. D. I. Blokhintsev
17. M. G. Bogoslovskiy
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22. F. A. Butayeva
23. A. S. Buchinskiy

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24. S. I. Vavilov /deceased/
25. V. V. Vargin
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29. F. I. Vergunas
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55. A. N. Zaydel'
56. V. V. Zelinskiy

57. V. D. Ivanov

58. M. Calvin [USA]
59. K. Ya. Kasparov
60. S. Katayev
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62. F. D. Klement
63. A. A. Klimova
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95. G. L. Natanson
96. S. A. Neyfakh
97. R. A. Nelinder
98. B. S. Neporent
99. V. S. Nikitenko
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101. I. V. Obreimov
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108. A. M. Polonskiy
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114. A. F. Prikhot'ko

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116. I. L. Raykh

117. K. Rats

118. RESOLUTION OF THE SESSION OF DEPARTMENT OF PHYSICO-MATHEMATICAL SCIENCES

119. S. N. Rzhevskin

120. Ye. P. Rikman

121. N. Riehl [German]

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123. F. A. Savchenko

124. V. P. Sasorov

125. Z. M. Sverdlov

126. LIGHT INDICATORS FOR LIGHT-CAMOUFLAGE

127. B. Ya. Sveshnikov

128. A. N. Sevchenko

129. V. Ya. Selegenev

130. SESSION OF DEPARTMENT OF PHYSICO-MATHEMATICAL SCIENCES, ACADEMY OF SCIENCES USSR.

131. A. A. Slyusarev

132. G. G. Slyusarev

133. S. Solodovnik

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5. Vestnik Leningradskogo Universiteta, Leningrad /Herald of Leningrad University, Leningrad/
6. Voprosy Pitaniya, Moskva /Problems of Nutrition, Moscow/
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19. Optiko-Mekhanicheskaya Promyshlennost' /Optical-Mechanical Industry/
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23. Sovetskaya Geologiya, Moscow /Soviet Geology, Moscow/
24. Trudy Vsesoyuznoy Konferentsii po Analiticheskoy Khimii, Akademii Nauk SSSR; Moskva-Leningrad /Works of the Conference on Analytical Chemistry, Academy of Sciences USSR; Moscow-Leningrad/
25. Trudy Moskovskogo Geologo-Rozvedochnogo Instituta /Works of Moscow Geological Prospecting Institute, Moscow/
26. Trudy Fizicheskogo Instituta imeni Lebedev, AN SSSR /Works of Physical Institute imeni Lebedev, Academy of Sciences USSR; Moscow/
27. Uspekhi Khimii, Moskva /Progress of Chemistry, Moscow/
28. Farmatsiya, Moskva /Pharmacy, Moscow./
29. Fizichni Zapiski, Kiyev /Physics Notes, Kiyev/
30. Shelk, Moskva /Silk, Moscow/

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6. List of Articles on Luminescence [Partial List]

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1. "Session of Department of Physico-Mathematical Sciences, Academy of Sciences USSR, Devoted to Problems of Luminescence of Solids and Liquids" UFN 1946, 28, 130.
2. Optics in Military Affairs: Collection of Articles Under Editorship of Academician S. I. Vavilov and Professor M. V. Sevost'yanova. 3rd edition, Revised and enlarged, in 2 volumes. Volume 1, Moscow-Leningrad, Published 1945 by Academy of Sciences USSR, 392 pages.
3. Cold Light [Kholodnyy Svet], Moscow-Leningrad; 1938; 119 pages.

Photoluminescence

The Luminescence of Inorganic Substances

General

1. E. I. Adirovich "Elementary Law of Extinction Corresponding to Zonal Theory of Luminescence in Crystallophosphors" DAN 1946, 53, 317. [Same as: "Elementary Law of Decay Corresponding to the Zone Theory of Crystal Luminescence" Comptes Rendus [Doklady] URSS, 1946, 53, 313].
2. V. V. Antonov-Romanovskiy "Mechanism of Illumination of Phosphors" IAN SSSR, Ser Fiz, 1945, 9, 369.
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* Same author as in #2. [i.e. Antonov-Romanovskiy]

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6. V. V. Antonov-Romanovskiy "The Glow Mechanism of Alkali-Halogens Phosphors" J. Physics USSR, 1941, 4, 175.

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8. D. I. Blokhintsev "Kinetics of Phosphorescence" ZhETF, 1937, 7, 1242 /also in: Physik Zs Sow 1937, 12, 586/.

9. D. I. Blokhintsev "Present State of the Theory of Phosphorescence" IAN SSSR, Ser Fiz, 1941, 5, 537.

10. D. I. Blokhintsev "Present State of the Theory of Phosphorescence" IAN SSSR, Ser Fiz, 1945, 9, 391.

11. V. V. Vargin and T. I. Veynberg "Luminescent Glass" IAN, Ser Fiz, 1945, 9, 563.

12. V. M. Kudryatseva, F. I. Vergunas, and P. S. Litvinova "Transfer of Energy to Crystal Lattice in the Luminescence Process" IAN SSSR, Ser Fiz, 1945, 9, 403.

13. V. L. Levshin "Influence of Mn Concentration and Temperature on the Radiation of Zn and Mn in ZnS Mn-Phosphors" DAN 1946, 54, 215. /also in: Comptes Rendus URSS 1946, 54, 215/.

14. V. L. Levshin "Investigations of Mechanism of Luminescence of Semi-conductors" ZhTF 1941, 11, 3, 273.

15. V. L. Levshin and V. N. Tugarinov "Origin of Radiation of Long and Short Duration in Phosphors with Organic Activator" DAN 1940, 28, 114 /also in: Comptes Rendus URSS, 1940, 28, 115/.

16. V. L. Levshin "Luminescence of Crystal Substances" IAN SSSR, Ser Fiz; 1945, 9, 355.

17. V. L. Levshin Luminescing Compositions /Svetyashchiyesya Sostavy/ Moscow-Leningrad: 1936; Acad Sci USSR, 134 pp.

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18. V. L. Levshin "Present Investigations of Mechanism of Luminescence in Semiconductors" IAN SSSR, Ser Fiz; 1941, 5, 510.

19. V. L. Levshin "Recherches sur la decroissance de la luminescence et le mecanisme d'emission de differentes substances" Acta Physica Polon. 1936, 5, 301.

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21. A. Toporets "Mechanism of Formation of Atomic and Colloidal Centers of Silver in Alkali-Halide Phosphors" DAN 1937, 15, 245 /also in: CR URSS, 1937, 15, 245/.

22. I. A. Khvostikov "Fluorescence of Solutions of Platino-Cyanide Salts" Trudy GOI, 1937, 12, 1.

23. A. A. Shishlovskiy "Photoluminescent Ions of Heavy Metals in Liquid and Solid Solutions"

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1. V. V. Antonov-Romanovskiy; V. L. Levshin; Z. L. Morgenshtern; and Z. A. Trapesnikova "Phosphors Sensitive to "Red" Light DAN 1946, 54, 19 /also in: Comptes Rendus URSS, 1946, 54, 19/.

2. O. Blank "Influence of Temperature on Absorption Spectrum of Solid Solutions of Samarium" ZhETF 1938, 8, 998.

3. F. A. Butayeva "Excitation of Luminophors in Low Pressure Mercury Lamps" DAN 1940, 27, 654 /also in: Comptes Rendus URSS, 1940, 27, 654/.

4. T. I. Veynberg "Influence of Chemical Composition of Uranyl Glass on Its Photoluminescence" DAN 1945, 46, 351 /ALSO in: CR URSS 1945, 46, 351/.

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5. L. A. Vinokurov; V. D. Ivanov; and V. L. Levshin "Certain Luminescing Substances used for Increasing the Light Efficiency and Improving Color of Mercury Light Sources" IAN SSSR, Ser Fiz; 1940, 4, 134.

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7. B. Ye. Gordon and A. A. Shishlovskiy "Photoluminescence of Solutions of Thallium Salts" ZhFKh 1940, 14, 1419 /also in: German, Acta Physico-chim URSS, 1940, 13, 247/.

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10. A. N. Zaydel'; N. Kremenevskiy; Ya. Larionov "Structure of Bands in Fluorescence Spectrum of Aqueous Solutions of Terbium Salts" IAN SSSR, Ser Fiz; 1937, 2, 207 /also in: Acta Phys-Chim URSS 1937, 6, 481/.

11. A. N. Zaydel and Ya. I. Larionov "Absorption and Fluorescence of Solutions of Cerium and Praseodymium Salts" IAN SSSR, Ser Fiz; 1940, 4, 25

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