"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A.L.

Plant physiology in Great Britain. Fiziol.rast. 3 no.2:179-183 Mr-Ap '56. (MLRA 9:7)

1.Institut fiziologii rasteniy imeni K.A.Timiryazeva Akademii nauk SSSR, Moskva.
(Great Britain--Botany--Physiology)

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KURSANOV, A.L.; VARTAPETYAN, B.B.

The physiological role of chlorophyll in tomato fruits [with English summary in insert. Fiziol.rast. 3 no.3:214-224 My-Je. 1956 (MLRA 9:9)

1.Institut fiziologii rasteniy imeni K.A.Timiryazeva i Institut biokhimii imeni A.N.Bakha Akademii nauk SSSR, Moskva.
(Chlorophyl) (Tomatoes) (Photosynthesis)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

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KURSANOV, A.L.

2

Participation of invertase in higher plants in formation of oligosaccharides. O. A. Pavlinova and A. L. Kursanov (K. A. Timiryazev Inst. Plant Physiol., Moscow). *Fiziol. Rastenii* 3, 530–40(1956).—Sprouts (15–20 day) of barley and young leaves of sugar beet yielded invertase specimens which hydrolyze sucrose and simultaneously form a nonreducing oligosaccharide which contains 1 unit of glucose and 2 of fructose. Partial enzymic hydrolysis yields fructose and glucose. The invertase of higher plants is a transfructosidase, which transfers the fructose residues from sucrose to water or to intact sucrose, the ratio of the 2 paths being 96–8 to 4–8. Maltase of barley or beet not only hydrolyzes maltose but also forms oligosaccharides in the path of transglucosidation. Leaves of these plants contain oligosaccharides of the nature noted above. G. M. Kosolapoff

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A. L.

"The Utilization of Radioactive Isotopes in Biology and Agriculture in the USSR," Science and Culture, Vol. 21, No. 9, March 1956.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A.L., akademik.

Radioactive elements and the study of plant life. Nauka i zhizn' 23 no.1:15-20 Ja '56. (MLRA 9:4)
(Radioactive tracers) (Botany--Physiology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A.L., akademik.

Work of a laboratory supervisor. Vest. AN SSSR 26 no.9:41-45 S '56. (MLRA 9:11)

(Laboratories)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV A L

RAKITIN, Yuriy Vladimirovich; KURSANOV, A.L., akademik, otvetstvennyy red.; TERENT'YEVA, M.I., red.izd-va; POLESITSKAYA, S.M., tekhn.red.

[Controlling preharvest dropping of apples and pears] U men'shenie preduborochnogo opadeniia plodov u iabloni i grushi. Moskva, Izd-vo Akad.nauk SSSR, 1957. 19 p. (MIRA 11:3)
(Apple) (Pear)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

RAKITIN, Yuriy Vladimirovich; OVCHAROV, Konstantin Yefremovich; KURSANOV, A.L., akademik, otvetstvennyy red.; TERENT'YEVA, M.I., red.izd-va; POLESITSKAYA, S.M., tekhnicheskiy red.

[Growth promoting substances and herbicides in cotton growing] Stimuliatory i gerbitsidy v khlopkovodstve. Moskva, Izd-vo Akad. nauk SSSR, 1957. 146 p. (MIRA 11:3)

(Cotton growing)
(Growth promoting substances)
(Herbicides)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A.L., akademik, otvetstvennyy redaktor; TUMANOV, I.I., otvetstvennyy redaktor; GENKEL', P.A., professor, otvetstvennyy redaktor; BRITIKOV, Ye.A., redaktor izdatel'stva; ZELENKOVA, Ye.V., tekhnicheskiy redaktor

[In memory of Academician N.A.Maksimov; a collection of articles] Pamiati akademika N.A.Maksimova; sbornik statei. Moskva, 1957. 323 p. (MIRA 10:10)

1. Chlen-korrespondent Akademii nauk SSSR (for Tumanov)
(Botany--Physiology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A. L.

"The root system as the organ of metabolism," a paper submitted at the International Conference on Radioisotopes in Scientific Research, Paris, 9-20 Sep 57.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A. L.

USSR/Plant Physiology - Respiration and Metabolism. I.

Abs Jour : Ref Zhur - Biol., No 21, 1958, 95627

Author : Kursanov, A.L., Kulayeva, O.N.
Inst : ---
Title : Metabolism of Organic Acids in the Roots of Cucurbita L.

Orig Pub : Fiziol. rastenii, 1957, 4, No 4, 322-331

Abstract : In an ether extract of the roots and in the lymph of young plants of the Mozoleyevskaya variety of Cucurbita L., which were raised in a full nutrient mixture and in solutions without P, the organic acids and ketoacids were determined by paper chromatography. Root fixation of CO_2 was studied by means of calculating the radioactivity of an alcohol extract after absorption of carbonate by the roots (0.005 n. of $NaHC^{14}O_3$ with activity of 20 μcuries in 300 ml). The radioactivity of each separate organic acid was determined after their chromatographic division. On the basis of the results obtained, the authors conclude that the

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essential role in root metabolism belongs to pyroracemic acid and to the cycle of di- and tricarboxylic acids, functioning on the basic of it , the transformation of which acids is accompanied by dark fixation of CO_2. Lack of P suppressed the carboxylic reaction and transformation of acids according to the Krebs cycle. In addition, the formation of glyoxalic and other acids in the roots were strengthened. Accumulation of citric acid with phosphorous starvation was not accompanied by the introduction of $C^{14}O_2$ into it. In the opinion of the authors, during the inhibition of acidifying decomposition of carbons according to the basic system (Krebs cycle in Cucurbita L.), the plant compensates for it by other acidifying processes. Feeding the starving plants with P quickly changes the composition of the organic acids to normal. Composition of organic acids in the roots and lymph was repeated, which points to the transfer of the acids synthesized by

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USSR/Plant Physiology. Respiration and Metabolism I-2

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 86614

Author : Kursanov A.L.
Inst : Institute of Plant Physiology, AS USSR
Title : Descending Current of Assimilants and Its Relationship to the Absorbing Activity of the Root.

Orig Pub : Fiziol. Rasteniy, 4, No 5, 417-424, 1957

Abstract : In 22-day squash plants grown in a soil culture of an aqueous culture, the third or fourth leaves from the bottom were exposed to diffused light in an atmosphere with $C^{14}O_2$. After 40-240 minutes this was followed by dismembering the plants, fixation at 80°C and extraction at 70°C with ethyl alcohol. During 40-120 minutes, 18-48 percent of the metabolites flowing away from the leaf entered into the roots of the plant. In 50-day plants the movement of metabolites toward the roots declined and halted during the daylight and intensified during the night. The separation of the substances flowing away from the leaf by means of anionite PE-9 and cationite

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USSR/Plant Physiology. Respiration and Metabolism I-2

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 86614

SDV-3 made it possible to establish that the ascending current contains, during the first 20 minutes, about 20 percent, and during 80 minutes, 15 percent of organic acids and amino acids, whereas in the descending current there initially form only sufats and , after 80 minutes, only 8 percent of substances of an ionic character. After 80 minutes, 33 percent of the assimilants reaching the roots became transformed into substances arrested in the anionite. The absence of mineral nutrition was found to entail a reduction in the influx of metabolites into the roots and in the rate of their metabolism. The placement of the roots of plants starved for 48 hours in a 0.0015 M solution of NH_4NO_3 for a period of 60 minutes resulted in a tripled-quadrupled increase in the influx of meatabolites to these roots. Study of the juice after a two-hour flow of metabolites into the roots showed that in the course of 76 hours ~40 percent of C^{14} returned to the above-ground organs at a rate that was at its maximum

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USSR/Plant Physiology. Respiration and Metabolism I-2

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 86614

during the first 6-10 hours. It was concluded that in the plants there is present a circulation of organic substances (from the leaves to the roots and partly back into the shoots). The entire study was executed in the Institute of Plant Physiology, AS USSR. Bibliography of 15 titles. --B.Ye. Kravtsova.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

USSR / Plant Physiology. Mineral Nutrition. I-2

Abs Jour : Ref Zhur - Bio., No 22, 1958, No 99923

Author : Kulayeva, O. N.; Silina, Ye. I.; and Kursanov, A. L.
Inst : Instute of Plant Physiology, AS USSR
Title : Ways of Primary Assimilation of Ammoniacal Nitrogen in the Roots of Pumpkin.

Orig Pub : Fiziol. Rastenii, 4, No 6, 520-528, 1957

Abstract : In the Institute of Physiology, Academy of Sciences USSR, plants were grown in aqueous cultures on complete nutrient mixture, nutrient mixture without P at the beginning of experiment but with a short-time P nutrition at the end of the experiment, and nutrient mixture without P throughout the whole experiment. The method of chromatography of paper was used to investigate the composition of free amino acids in the roots and juice of pumpkin. Upon feeding of plants

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COUNTRY : USSR
CATEGORY : PLANT PHYSIOLOGY Respiration and Metabolism. I

ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15255

AUTHOR : Kursanov, A.L.
INST. : AS USSR
TITLE : The Root System of Plants as an Organ of Metabolism.

ORIG. PUB. : Izv. AN SSSR. Ser. biol., 1957, No.6, 689-705

ABSTRACT : On the basis of a literary survey the author is certain that plant roots have an unusually diverse metabolism, especially in respect to the conversion of N compounds. In experiments with squash it was shown that 16 - 45% of the products of photosynthesis in the form of sugars is directed immediately to the roots. The sugars are converted into organic acids and amino acids in the tracts and especially quickly in the roots. In the

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COUNTRY
CATEGORY : PLANT PHYSIOLOGY.

ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959.

AUTHOR :
INST. :
TITLE : No. 15255.

ORIG. PUB. :

ABSTRACT : roots the sugars are transformed in the process of glycolysis and respiration into a number of intermediate products of ionic character which serve as acceptors for the primary assimilation of inorganic forms of N and other elements of soil nutrients. A portion of the products of interaction of organic acceptors and mineral salts is used by the roots themselves, the other part is contained in the organs above ground. In

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

COUNTRY :
CATEGORY : PLANT PHYSIOLOGY. I

ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959,

No. 15255

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : glycolysis and Krebs cycle diminish, which leads to a change in the composition of the acceptors which are formed in the roots. Entering such plants, NH_3 chiefly forms compounds of the allantoin type and substances with guanidine groups. The author concluded that in the rotation of organic substances the roots accomplish a central metabolic function which promotes the metabolism of a significant part of the assimilants, deter-

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A.L.

Atom at work; discussion with Academician A.L. Kursanov. Kim.nat. ns.7:29-33 Jl '57. (MLRA 10:8)
(Radioactive tracers)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A.L.; KRYUKOVA, N.N.

Effect of keto- and hydroxyacids on photosynthesis [with summary in English]. Biokhimiia 22 no.1/2:391-398 Ja-F '57. (MLRA 10:7)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva i Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(PHOTOSYNTHESIS) (PLANTS, EFFECT OF ACIDS ON)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

CHAYLAKHYAN, Mikhail Khristoforovich; KURSANOV, A.L., akademik, otvetstvennyy red.; PASHKOVSKIY, Yu.A., red.izd-va; GOLUBEVA, V.A., tekhn.red.

[Fundamental laws of the ontogeny of higher plants] Osnovnye zakonomernosti ontogeneza vysshikh rastenii. Moskva, Izd-vo Akad. nauk SSSR, 1958. 77 p. (MIRA 11:6)
(Ontogeny (Botany))

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

RATNER, Yevsey Idelevich; KURSANOV, A.L., akademik, otv.red.; SHAROVATOVA, I.B., red.izd-va; GUSEVA, A.P., tekhn.red.

[Plant nutrition and the activity of root systems] Pitanie rastenii i zhiznedeiatel'nost' ikh kornevykh sistem. Moskva, Izd-vo Akad.nauk SSSR, 1958. 102 p. (Timiriazevskie chteniia, no.16) (MIRA 12:6)
(Plants--Nutrition) (Roots (Botany))

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A. [L.] (Moscow)

The Metabolism of Roots and the Assimilation of Ammonia by plants which are Deficient in Phosphorus,"

paper submitted for presentation at the 2nd Intl. Symposium Agrochemical, on the Pedological and Biochemical Aspects of Phosphoric Nutrition of Plants, Procchio, Isle of Elba, Italy, 8-13 Sep 1958.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A. L., Mbr., Acad. of Sci. USSR and I. I. TUMANOV, Corr. Mbr., Acad. of Sci., USSR

"Investigations in Plant Physiology at the New Station of the Institute of Plant Physiology imeni K. A. Timiryazev, AS USSR, (equipped with an air-conditioning plant)."

scientific report presented at the Plenary Meeting of the Department of Biological Sciences, Acad. Sci. USSR, 16-17 June 1958, (Vest. AN SSSR, 1958, No. 8, p. 57-68)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

USSR / Plant Physiology. General Problems. I-1

Abs Jour: Ref Zhur-Biol., 1958, No 16, 72539.

Author : Kursanov, A. L.
Inst : AS USSR.
Title : Characteristic Features of the Development of Plant Physiology in the Soviet Union.

Orig Pub: Vestn. AN SSSR, 1958, No 1, 39-44.

Abstract: No abstract.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A. L. (Moscow)

"Das Wurzelsystem als Stoffwechselorgan."

paper presented at the Intl. Conference on Radioisotopes in Scientific Research in Paris, 19-20 Sept 1957;.

Angewandte Chemie, No. 3, 1958.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A.L.

KURSANOV, A.L.; CHAYLAKHYAN, M.Kh.; PAVLINOVA, O.A.; TURKINA, M.V.; BROVCHENKO, M.I.

Translocation of sugars in grafted plants [with summary in English]. Fiziol. rast. 5 no.1:3-15 Ja-F '58. (MIRA 11:1)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR, Moskva.
(Plants, Motion of fluids in) (Grafting) (Sugars)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV A. L.

AUTHOR: None Given 30-58-5-6/36

TITLE: Discussion on the Report of Activity (Preniya po otchetnomu dokladu)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1958, Nr 5, pp 29-31 (USSR)

ABSTRACT: I. V. Tyurin, Member, Academy of Sciences, USSR devoted his speech to some results of activity of the Soil Institute imeni V.V. Dokuchayev. A. L. Kursanov, Member, Academy of Sciences, USSR spoke on the participation of the AS USSR in the international exhibition 1958 in Brussels. K. V. Ostrovityanov, Member, Academy of Sciences, USSR spoke on some success in the field of social sciences, but at the same time also pointed out a certain backwardness. V. V. Belousov, Corresponding Member, Academy of Sciences, USSR reported on the participation of Soviet scientists in the works of the Geophysical Year. V. I. Popkov, Corresponding Member, Academy of Sciences, USSR, emphasized the importance of the works of the Institute for Power Engineering imeni G. M. Krzhizhanovskiy. G. A. Chebotarev, Director of the Library of the AS USSR spoke on the participation of this collective in the establishment of a large academic library in No-

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vosibirsk. V. G. Bogorov, Director of the Institute for Oceanology, emphasized the importance of the oceanographic research works. V. V. Vinogradov, Member, Academy of Sciences, USSR, severely criticized the deficiencies in the development of social sciences in the AS USSR, and he emphasized the difficulty of publishing studies. V. A. Ambartsumyan, Member, Academy of Sciences, USSR reported on important problems of the development of Soviet astrophysics. V.A. Engel'gardt, Member, Academy of Sciences, USSR emphasized the unsatisfactory position of the institutes in the department for biological sciences. Ye. M. Zhukov, Corresponding Member, Academy of Sciences, USSR spoke on achievements, shortcomings and tasks of social sciences. A. I. Nazarov, Director of the Publisher of the AS USSR spoke on serious difficulties in the work of this publisher, where he also criticized the institutes which send to the press blown-up and unfinished material. V.F. Kuprevich, Corresponding Member, Academy of Sciences, USSR spoke on important tasks of biological science and emphasized the necessity of training young physicists and chemists for this work, in which he was supported by R.D. Obolentsev, Chairman of the Presidium of the Bashkiriya Branch. A. V. Sidorenko, Chairman of the Pre-

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sidium of the Kola Branch spoke on the cooperation with the Murmansk Council of Economy, The report of activity of the AS USSR for the year 1957 was approved, the assembly recommending to the Presidium of the Academy as well as to the Office of the Departments to consider the critical remarks and proposals in the precise determination of the plan for 1958.

1. Scientific research--USSR 2. Scientific reports--USSR

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A. L. and ZAPROMETOV, M. N.

"A Study of the Formation and Transformations of Catechins in Tea Leaves by Means of $^{14}CO_2$." AtomPraxis, No. 7-8, Jul/Aug 58. (Germany)

Inst. Plant Physiology, Acad. Sci. USSR, Moscow.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

Kursanov, A.L.

AUTHOR: Kursanov, A. L., Academician 30-1-6/39

TITLE: Characteristic Features of Development of the Plant Physiology in the Soviet Union (Kharakternyye osobennosti razvitiya fiziologii rasteniy v sovetskom soyuze)

PERIODICAL: Vestnik AN SSSR, 1959, Vol. 29, Nr 1, pp. 39-44 (USSR)

ABSTRACT: During the first years after the October Revolution only two small laboratories existed in Moscow in which investigations of plantphysiology were carried out: At Moscow State University, under the supervision of F. N. Krasheninnikov, and at the Agricultural Petrovskiy-Academy under D. N. Pryanishnikov. At that time fewer experiments were carried out but people read more, thought about and discussed interesting problems, and several classical works dealing with this field came into being. Today planned work is required and this work must also be carried out rapidly. First there were only two official periodicals of the AN "Izvestiya" and "Doklady", so that many works were printed in foreign periodicals (particularly in Germany). As an essential innovation of that time the increased interest displayed by scientists for ecological

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Characteristic Features of Development of the Plant Physiology in the Soviet Union 30-1-6/39

physiology must be looked upon, and the works by N. A. Maksimov, S.P. Kostychev, L. A. Ivanov, and Ye. F. Votchal must be looked upon as the works of pioneers in this field. Valuable work was carried out at the institutes and test stations of plant physicology on the physiology of tobacco, the beetroot, the cotton plant, of wheat, rice, tea, as well as of plants containing caoutchouc and others. The author considers it of importance that every effort be made in order that plant physiology be developed at local stations and that, first of all, the physiological laboratories of testing stations be restored. Steps have also already been undertaken in order to provide an easily transportable apparatus: Radioactive isotopes "Varburg" devices, as well as various devices for measuring light are used. The Institute for Plant Physiology imeni K. A. Timiryazev will be provided with a phytotron, an artificial climate conditioning station, where temperature, moisture content, and illumination can be exactly regulated. Quite new tendencies have developed, such as the theory of hormons and physiologically active synthetic substances by the work carried out by N. G. Kholodnyy, F. A.

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Characteristic Features of Development of the Plant Physiology in the Soviet Union 30-1-6/39

Maksimov, and S. S. Nemethin, in which case physiologists and chemists work together. Furthermore, the tasks are mentioned which must be dealt with and achieved in the near future. The definite explanation of breathing- and photosynthetic cycles in a chemical as well as in an energetic respect will make it possible, already within the next ten years, to discover the close connections existing between these two great tendencies of biological metabolism. Also the physiology of whole plants is intended to be further developed in order to be able to control the nutrition, the growth, and the development of the plants. Also new ways for the research of the physiology of the development and heritage are to be found. Also the problem of using new physiologically active organic fertilizers ought to be made the object of further research.

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Card 3/3 1. Botany-Study and teaching 2. Ecology

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

RATNER, Yevsey Idelevich; BURKIN, Ivan Alekseyevich; KURSANOV, A.L., akademik, otv.red.; ANTONYUK, L.D., red.izd-va; UL'YANOVA, O.G., tekhn.red.

[Molybdenum and crop yields] Molibden i urozhai. Moskva, Izd-vo Akad.nauk SSSR, 1959. 39 p. (MIRA 12:12)
(Plants, Effect of molybdenum on)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

KURSANOV, A.L., akademik, red.; NICHIPOROVICH, A.A., prof., red.; KRASNOVSKIY, A.A., prof., red.; RUBIN, B.A., prof., red.; BOYCHENKO, Ye.A., doktor biol.nauk, red.; OSIPOVA, O.P., kand.biol.nauk, red.; KLESHNIN, A.F., red.izd-va; POLYAKOVA, T.V., tekhn.red.

[Problems of photosynthesis; reports at the Second All-Union Conference on Photosynthesis, Moscow, Jan.21-26, 1957] Problemy fotosinteza; doklady na II Vsesoiuznoi konferentsii po fotosintezu, Moskva, 21-26 ianvaria 1957 g. Moskva, 1959. 747 p. (MIRA 12:12)

1. Akademiya nauk SSSR. Otdeleniye biologicheskikh nauk.
(PHOTOSYNTHESIS--CONGRESSES)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

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22(1) SOV/30-59-3-7/61

AUTHOR: Kursanov, A.L., Academician

TITLE: Some Problems of the Training of Young Scientists (Nekotoryye voprosy formirovaniya molodykh uchenykh)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 3, pp 36-44 (USSR)

ABSTRACT: The author of this paper reports on his experience as the head of a laboratory in the training of young scientists, Therein he distinguishes between the large number of scientific researchers who have been specially trained and scientists with their own initiative, who are selected from among them, in a proportion of 3-30%. The universities are entrusted with the training of scientific researchers, while it is the task of scientific research institutes to select independent scientists from among them. The age of 27-28 years is considered to be most favorable for young scientists, who must combine scientific initiative with thorough knowledge of the chosen field. Modern scientists must keep pace with the progress of science. Furthermore, he must be familiar with modern working methods, instruments, and also the methodology of Marxism-Leninism. He must keep contact also with experts of other fields, should be versed in experimental work, study

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Some Problems of the Training of Young Scientists

scientific literature and publish his own works. In conclusion the author emphasizes that a true scientist usually is moderate in judging his own knowledge and success and respects the views of other scientists. There is 1 reference.

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VARTAPETYAN, B.B.; KURSANOV, A.L.

Studying water metabolism of plants by using water containing heavy oxygen (H_2O^{18}). Fiziol.rast. 6 no.2:144-150 Mr-Ap '59. (MIRA 12:5)

1. K.A.Timiryazev, Institut of Plant Physiology, U.S.S.R. Acndemy of Sciences, Moscow.
(Plants--Absorption of water)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

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KURSANOV, A.L.; PAVLINOVA, O.A.; AFANAS'YEVA, T.P.

Glycolytic enzymes in conducting tissues of the sugar beet. Fiziol.rast. 6 no.3:286-295 My-Je '59. (MIRA 12:8)

1. K.A.Timiryazev Institut of Plant Physiology, The U.S.S.R. Academy of Sciences, Moscow.
(Sugar beets) (Glycolysis) (Plant cells and tissues)

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KURSANOV, A.L.; BROVCHENKO, M.I.; PARIYSKAYA, A.N.

Passage of assimilates into the conducting tissues of rhubarb leaves (Rheum rhaponticum L.). Fiziol. rast. 6 no.5:527-536 S-O '59. (MIRA 13:2)

1.K.A. Timiryazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Plants, Motion of fluids on)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2"

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KURSANOV, Andrey L'vovich; SHAROVATOVA, I.B., red.izd-va; UL'YANOVA, O.G., tekhn.red.

[Interrelations of physiological processes in plants; reported at the 20th annual Timiriazev Lecture, June 3, 1959] Vzaimosviaz' fiziologicheskikh protsessov v rastenii; dolozheno na dvadtsatom ezhegodnom Timiriazevskom chtenii, 3 iiunia 1959 g. Moskva, Izd-vo Akad.nauk SSSR, 1960. 43 p. (Timiriazevskie chteniia, no.20). (MIRA 13:3)

(Plant physiology)

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RUBIN, Boris Anisimovich; KURSANOV, A.L., akademik, otv.red.; SHAROVATOVA, I.B., red.izd-va; DOROKHINA, I.N., tekhn.red.

[Respiration and its role in the immunity of plants; reported at the 12th annual Timiriazev Reading, May 29, 1958] Dykhanie i ego rol' v immunitete rastenii; dolozheno na deviatnadtsatom ezhegodnom Timiriazevskom chtenii 29 maia 1958 g. Moskva, Izd-vo Akad. nauk SSSR, 1960. 65 p. (Timiriazevskie chteniia, no.19). (MIRA 13:7)

(Plants--Respiration) (Plants--Disease and pest resistance)

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BARTAPETYAN, B.B.; KURSANOV, A.L.

Direct inclusion of molecular oxygen of the atmosphere and water into the catechols of the tea plant during oxidative condensation. Biokhim. chain. proizv. no.8:138-144 '60. (MIRA 14:1)

1. Institut fiziologii rasteniy imeniy K.A. Timiryazeva AN SSSR, Moskva.
(Tea) (Catechol) (Oxidation)

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KURSANOV, A.L.; VYSKREBENTSEVA, E.I.

Primary inclusion of phosphates in root metabolism.
Fiziol.rast. 7 no.3:276-286 '60. (MIRA 13:6)

1. K.A. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Plants--Assimilation) (Phosphorus metabolism)

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KURSANOV, A.L.

Visiting plant physiologists in England and Scotland. Fiziol. rast. 7 no.6:748-755 '60. (MIRA 14:1)

1. K.A. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Great Britain—Plant physiology—Research)

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NICHIPOROVICH, A.A.; STROGONOVA, L.Ye.; CHMORA, S.N.; VLASOVA, M.P.; KURSANOV, A.L., otv.red.; SHAROVATOVA, I.B., red.izd-va; VOLKOVA, V.M., tekhn.red.

[Photosynthetic activity of cultivated plants; methods and object of records kept in connection with the formation of grain] Fotosinteticheskaia deiatel'nost' rastenii v posevakh; metody i zadachi ucheta v sviazi s formirovaniem urozhaev. Moskva, Izd-vo Akad.nauk SSSR, 1961. 132 p. (MIRA 14:4)

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KURSANOV, A.L.

Modern plant physiology and outlook for its development. Izv. AN SSSR. Ser. biol. no.2:181-201 Mr-Ap '61. (MIRA 14:3)

1. Timiryazev Institute of Plant Physiology, Academy of Science of the U.S.S.R., Moscow.
(PLANT PHYSIOLOGY—RESEARCH)

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KURSANOV, A.L.

Introductory speech. Izv. AN SSSR, Ser.biol. no.6:833-834 N-D '61. (MIRA 14:11)

(PLANTS—NUTRITION)

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KURSANOV, A. L., akad. (Sofiia)

Moving up of the organic substances in the plants. Spisanie BAN 6 no.2:65-83 '61.

1. Bulgarskata akademiia na naukite i Sofiiski universitet.

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Effect of adenosinetriphosphoric acid on the uptake of assimilates by the conducting system of the sugar beet. Fiziol.rast. 8 no.3:270-278 '61. (MIRA 14:5)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva Akademii nauk SSSR, Moskva.
(Adenosinetriphosphoric acid) (Plants, Motion of fluids in)

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Exchange of water contained in plant tissues and the liquid and vaporous water of the environment. Fiziol.rast. 8 no.5:569-575 '61. (MIRA 14:10)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Plants—Absorption of water)

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KURSANOV, A.L., akademik

Deserves attention. Nauka i zhizn' 28 no.7:85 Jl '61. (MIRA 14:8)

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TIMIRYAZEV, Klementiy Arkad'yevich; KURSANOV, A.L., akademik, otv. red.; ISAYEV, V.A., red. izd-va; VOLKOVA, V.G., tekhn. red.

[The life of the plant; ten popular lectures] Zhizn' rasteniia; desiat' obshchedostupnykh lektsii. Moskva, Izd-vo Akad. nauk SSSR, 1962. 289 p. (MIRA 15:3)
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KURSANOV, A.L., akademik; ZAPROMETOV, M.N., kand.biologicheskikh nauk

Catechins. Zdorov'e 8 no.4:6-7 Ap '62. (MIRA 15:4)
(CATECHIN) (TEA—PHYSIOLOGICAL EFFECT)

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KURSANOV, A.L., akademik

Internal organization of physiological processes in plants and the new principles of plant growing. Vest. AN SSSR 32 no.9:49-67 S '62. (MIRA 15:9)

(Plant physiology) (Tissue culture)

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CHAYLAKHYAN, Mikhail Khristoforovich; KURSANOV, A.L., akademik, otv. red.; PASHKOVSKIY, Yu.A., red.izd-va; YEGOROVA, N.F., tekhn. red.

[Gibberellins for plants; instructions for testing and using gibberellins on cultivated plants] Gibberelliny rastenii; instruktsiia po ispytaniiu i primeneniiu gibberellinov na kul turnykh rasteniiakh. Moskva, Izd-vo AN SSSR, 1963. 61 p. (MIRA 16:10)

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SABININ, Dmitriy Anatol'yevich, prof.; CHAYLAKHYAN, M.Kh., prof., otv. red.; KURSANOV, A.L., akademik, red.; GENKEL', P.A., red.; BLAGOVESHCHENSKIY, A.V., prof., red.; TRUBETSKOVA, O.M., kand. biol. nauk, red.; SHTERNBERG, M.B., red. izd-va; SUSHKOVA, L.A., tekhn. red.; KASHINA, P.S., tekhn. red.

[Physiology of plant development]Fiziologiia razvitia rastenii. Moskva, Izd-vo Akad. nauk SSSR, 1963. 194 p. (MIRA 16:2)

1. Cheln-korrespondent Akademii nauk Armyanskoy SSR (for Chaylakhyan), 2. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR (for Genkel'),

(Plant physiology)

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AMBARTSUMYAN, V.A., akademik; ASRATYAN, E.A.; BOGOLYUBOV, N.N., akademik; VINOGRADOV, A.P., akademik; GINETSINSKIY, A.G.; KNUNYANTS, I.L., akademik; KOCHETKOV, N.K.; KURSANOV, A.L., akademik; MEL'NIKOV, O.A.; NESMEYANOV, A.N., akademik; NESMEYANOV, An.N., doktor khim. nauk; OBREIMOV, I.V., akademik; POLIVANOV, M.K., kand.fiz.-mat.nauk; REUTOV, O.A.; RYZHKOV, V.L.; SPITSIN, V.I., akademik; TAMM, I.Ye., akademik; FESENKOV, V.G., akademik; FOK, V.A., akademik; SHCHERBAKOV, D.I., akademik; FRANK, I.M.; FRANK, G.M.; KHOKHLOV, A.S., doktor khim. nauk; SHEMYAKIN, M.M., akademik; ENGEL'GARDT, V.A., akademik; SHAPOSHNIKOV, V.N., akademik; BOYARSKIY, V.A.; LIKHTENSHTEYN, Ye.S.; VYAZEMTSEVA, V.N., red.izd-va; KIYAYS, Ye.M., red.izd-va; TARASENKO, V.M., red.izd-va; POLYAKOVA, T.V., tekhn. red.

[As seen by a scientis: From the Earth to galaxies, To the atomic nucleus, From the atom to the molecule, From the molecule to the organism] Glazami uchenogo: Ot Zemli do galaktik, K iadru atoma domolekuly, Ot molekuly do organizma. Moskva, Izd-vo AN SSSR, 1963. 736 p. (MIRA 16:12)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN SSSR (for Asratyan, Ginetsinskiy, Kochetkov, Mel'nikov, Reutov, Ryzhkov, Frank, I.M., Frank, G.M.)
(Astronomy) (Nuclear physics) (Chemistry) (Biology)

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Visit to the plant physiologists of Yugoslavia. Fiziol. rast. 11 no. 3:557-561 '64. (MIRA 17:7)

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KURSANOV, A.L., akad.

Some prospects in the control of plant physiological activities. Spisanie BAN 8 no.1:75-88 '63.

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KURSANOV, A.L., akad.

Metabolism of roots, and primary assimilation of ions. Priroda Bulg 12 no.2:3-12 Mr-Ap '63.

1. Direktor na Instituta po fiziologiia na rasteniiata "K.A. Timiriazev" pri AN na SSSR.

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KURSANOV, A. L.

"Relationship between metabolism and the absorption and distribution of nutrients in intact plants."

report submitted for 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

TIMiryasev Inst of Plant Physiology, Moscow.

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BARDINSKAYA, Margarita Sergeyevna [deceased]; KURSANOV, A.L., akademik, otv. red.; MANSKAYA, S.M., red.; MOSKALEVA, V.Ye., red.; SHUBERT, T.A., red.; ZAFRAMETOV, M.N., red.; PAVLINOVA, O.A., red.

[Plant cell walls and their formation; some problems of the chemistry, biochemistry and physiology of lignification] Rastitel'nye kletochnye stenki i ikh obrazovanie; nekotorye voprosy khimii, biokhimii i fiziologii odrevesneniia. Moskva, Nauka, 1964. 158 p.
(MIRA 18:1)

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KURSANOV, A.L., akademik, otv. red.; OVCHAROV, A.Ye., doktor biol. nauk, red.; GENKEL', P.A., prof., red.; MOLYAKOV, I.M., prof., red.; PROKOF'YEV, A.A., prof., red.; STROMA, I.G., kand. sel'khoz. nauk, red.; SEDENKO, D.M., red.; GENKEL', K.P., red.; KHOR'KOV, Ye.I., red.

[Biological bases of increasing the quality of farm crop seeds; materials of a scientific session held November 26-30, 1963 in Moscow] Biologicheskie osnovy povysheniia kachestva semian sel'skokhoziaistvennykh rastenii; materialy nauchnoi sessii, sostoiavsheisia 26-30 noiabria 1963 g. v Moskve. Moskva, Nauka, 1964. 278 p. (MIRA 18:3)

1. Akademiya nauk SSSR. Institut fiziologii rastenii.

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ZAPROMETOV, Mikhail Nikolayevich; KURSANOV, A.L., akademik, otv.red.

[Biochemistry of catechols; their biosynthesis transformation and practical use] Biokhimiia katekhinov; biosintez, prevrashcheniia i prakticheskoe ispol'zovanie. Moskva, Nauka, 1964. 294 p. (MIRA 17:12)

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KURSANOV, A.L.; TURKINA, M.V.; SOKOLOVA, S.V.

Transformation of sugars penetrating plant cells. Fiziol. rast. 11 no.4:569-580 Jl-Ag '64. (MIRA 17:11)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.

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TURKINA, M.V.; KURSANOV, A.L.; SOKOLOVA, S.V.

Competition of sugars during their penetration into cells.
Fiziol. rast. 11 no.5:800-811 S-O '64. (MIRA 17:10)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.

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KURSANOV, A.L.; KULAYEVA, O.N.; SVESHNIKOVA, I.N.; POPOVA, E.A.; BOLYAKINA, Yu.P.; KLYACHKO, N.L.; VOROB'YEVA, I.P.

Restoration of cellular structures and metabolism in yellow leaves under the effect of 6-benzylaminopurine. Fiziol. rast. 11 no.5:838-847 S-O '64. (MIRA 17:10)

1. Timiriazev Institute of Plant Physiology, U.S.S.R., Academy of Sciences, Moscow.

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KURSANOV, A.L., akademik

Paths of experimental biology. Vest. AN SSSR 34 no.7:36-42
Jl '64 (MIRA 17:8)

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KURSANOV, A.L.; KULAYEVA, O.N. (Moskva)

Current trends in the development of botany; based on materials from the 10th International Botanical Congress. Usp. sovr. biol. 59 no.1:3-11 Ja-F '65. (MIRA 18:3)

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L 39434-65 EWT(a)-2/EWG(c)/EWG(j)/EWG(r)/EWG(v)/EWT(1)/FS(v)-3 Pe-5 DD

ACCESSION NR: AP5007667 S/0020/65/160/006/1427/1429

AUTHOR: Lebedev, S. I.; Litvinenko, L. G.; Kuraanov, A. L.

TITLE: Chlorophyll biosynthesis in red and near infrared regions

SOURCE: AN SSSR. Doklady, v. 160, no. 6, 1965, 1427-1429

TOPIC TAGS: corn, chlorophyll, biosynthesis, monochromatic light, red light, low intensity, chromatography, spectrophotometry

ABSTRACT: Chlorophyll biosynthesis was investigated in etiolated corn sprouts under conditions of red light (660 millimicrons) and near infrared light (770 millimicrons) of low intensities. The sprouts were exposed to a monochromatic light with an intensity of 40 micron watts/cm^2 for the red light and 33 micron watts/cm^2 for the near infrared light for periods of 1 to 60 min. All operations on the etiolated plants were conducted in the presence of a very weak green light to safeguard chlorophyll biosynthesis. Green pigments were determined in the etiolated plants before and after light exposure by paper chromatography followed by spectrophotometry on an SF-4 in the 600-700 millimicron region. Results indicate that near

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ACCESSION NR: AP5007667

infrared radiation displays an inhibiting effect on chlorophyll biosynthesis, particularly on reduction of protochlorophyllide into chlorophyllide. Chlorophyll formation in the etiolated corn sprouts under the given experimental conditions proceeded according to the generally accepted plan for the final stage of chlorophyll biosynthesis: protochlorophyllide to chlorophyllide a to chlorophyll a. It was established that chlorophyll biosynthesis proceeds normally under red light of low intensity, but is inhibited under near infrared light of low intensity. Orig. art. has: 4 figures.

ASSOCIATION: Ukrainskaya sel'skokhozyaystvennaya akademiya (Ukrainian Agricultural Academy)

SUBMITTED: 07Oct63 ENCL: 00 SUB CODE: LS

NR REF SOV: 008 OTHER: 010

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927810002-2

OKANENKO, Arkadiy Somenovich; KURSANOV, A.L., akademik, otv. red.; MATVEYENKO, T.A., red.

[Physiology of sugar beets and breeding problems] Fiziologiia sakharnoi svekly i voprosy selektsii. Moskva, Nauka, 1965. 74 p. (Timiriazevskie chteniia, no.24)
(MIRA 18:8)

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KURSANOV, A. V.

"New direct method of preparation of acid amides from carboxylic acids."
A. V. Kursanov and Yu. M. Zolotov. (p. 2201)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1949, Vol. 19, No. 12

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KURSANOV, A. V.

RT-1415 (A new method of transforming acyl chlorides into the corresponding nitriles) Novyi sposob prevrashcheniia khlorangidridov karbonovykh kislot v sootvetstvuiushchie nitrily.
SO: Zhurnal Obshchei Khimii, 22(2): 274-278, 1952

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KURSANOV, A.V.; DERKACH, G.I.

Esters of N-phosphoric acid, trichloroiminoacetic acid, and trioxyphosphazotrichloroacetyl ester. Zhur.ob.khim. 26 no.9: 2631-2638 S '56. (MLRA 9:11)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Esters)

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PROCESSES AND PROPERTIES INDEX

10

1-Benzylcyclohexene. Condensation of benzyl alcohol with cyclohexene under the action of phosphoric anhydride. D. N. KURBANOV. *J. Russ. Phys. Chem. Soc.* 62, 1091-5(1930).—1-Benzylcyclohexene (I) was obtained by dehydration with P_2O_5 of $PhCH_2OH$ in cyclohexene: $C_6H_{10} + HOCH_2Ph \longrightarrow C_6H_9CH_2Ph$. Another product of the reaction is a resinous mass which cannot be distd. without decompn. To 80 g. cyclohexene and 50 g. P_2O_5 cooled with ice 30 g. $PhCH_2OH$ was added by drops. The mixt. was, after 12 hrs.' standing, treated with $NaHCO_3$ soln., washed with water, dried with Na_2SO_4 and fractionated; the collected fraction b_{15} 127.2–8.4°, d_{4}^{20} 0.9634, n_D^{20} 1.5400. Other consts. as well as analysis show the product to be identical with I as described by its earlier investigators. K. assumes that the reaction takes place in 2 steps: (a) benzyl phosphate combines with cyclohexene at the double bond; (b) H_3PO_4 is liberated. Partial oxidation of I by means of alk. $KMnO_4$ at 0–4° results in formation of what K. believes to be the glycol $C_6H_9(OH)_2CH_2Ph$ and $BzOH$.

J. G. TOLPIN

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PROCESSES AND PROPERTIES INDEX

2-3

Condensation of benzyl alcohol with cyclohexene in the presence of phosphorus pentoxide. D. N. Kursanov (J. Russ. Phys. Chem. Soc., 1930, 62, 1691—1695).—The condensation of benzyl alcohol and cyclohexene in the presence of phosphorus pentoxide takes place readily with the formation of much tarry matter which cannot be purified, and benzyl-Δ^1-cyclohexene, b. p. 127·2—128·4°/15 mm., d^{20} 0·9634, n_D^{20} 1·5460, which on oxidation with alkaline potassium permanganate yielded benzoic acid and a neutral compound, m. p. 105—106°, which could not be identified.

M. Zvegintzov.

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PROCESSES AND PROPERTIES INDEX

A-3

Benzylidenecyclohexane. D. N. Kursanov (J. Gen. Chem. Russ., 1931, 1, [illegible]). — Mg cyclohexyl bromide reacts with PhCHO giving [illegible]% of phenylcyclohexylcarbinol and 18% of $CH_2Ph\cdot OH$; the carbinol was converted into the K xanthate, which gave 70% of the corresponding Me ester, [illegible] 54–55°, by the action of MeI in C_6H_6. The ester when heated under reduced pressure gave benzylidenecyclohexane, b. p. 117—118°/10 mm., d^{20} 0.[illegible], oxidised by $KMnO_4$ to cyclohexanone and BaOH. The hydrocarbon differs from that previously obtained from cyclohexene and $CH_2Ph\cdot OH$ (A., [illegible]), which is considered to be identical with Auwers and Treppmann's benzylcyclohexene (A., 1915, i, [illegible]).

G. A. R. Kon.

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CA

2

The paraffins and some of its properties. D. N. Kursanov. *Uspekhi Khim.* 2, 129-65(1933).—A review with collections of data for many substances. F. H. R.

Vapor-liquid equilibria of hydrocarbon mixtures. E. C. Bromiley and D. Quiggle. *Ind. Eng. Chem.* 25, 1136-8(1933).—The following mixts. were studied to find suitable combinations for testing the efficiencies of fractionating columns: binary mixts., heptane-toluene, toluene-octane, 2,2,4-trimethylheptane-octane and heptane-methylcyclohexane; tertiary mixts.: heptane-methylcyclohexane-toluene and heptane-methylcyclohexane-acetone. The systems heptane-toluene and octane-toluene were most efficient. I. H. Reedy

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H-1

Parachors of polycyclic compounds. D. N. KURSANOV (J. Gen. Chem. Russ., 1934, 4, 596—602). —Mumford and Phillips' view that a simple relationship exists between intramol. strain (I) and parachor variations (A., 1929, 1219) is not sustained by the vals. found for the parachors (P) of fenchane, cyclofenchene, carane, *d*-pinene, *cis*- and *trans*-decahydronaphthalene, and dicyclopentyl; in spite of considerable variations in (I) in this group, the experimentally determined P agree within 1% with the vals. calc. on the basis of Mumford's constn. R. T.

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CA

10

Derivatives of 1,2 diphenylethane. D. N. Kursanov and A. S. Kichkina. *J. Gen. Chem.* (U. S. S. R.) 5, 1342-7 (1935). While biphenyl gives easily $PhC_6H_4NO_2$ ($PhCH_3$) (I) under all conditions of direct nitration gives only (p-$O_2NC_6H_4CH_3$). This difficulty of obtaining monosubstituted derivs. from I is explained by the isolating influence of the 2 CH_3 groups (cf. Robinson, *Versuch einer Elektronentheorie org. chem. Reaktionen* 1932). The first monosubstituted I, viz., p-$H_2NC_6H_4C_2H_4Ph$ (II), was obtained by Braun (C. A. 7, 2580) by condensation of $BzNHC_6H_4C_2H_4Cl$ with C_6H_6 and $AlCl_3$ and subsequent hydrolysis. The synthesis of II was greatly simplified by direct condensation of p-$O_2NC_6H_4C_2H_4Cl$ (III) with C_6H_6 and $AlCl_3$ to p-$O_2NC_6H_4C_2H_4Ph$ (IV) and reduction to II. Since o-$O_2NC_6H_4C_2H_4Cl$ (V) does not react under these conditions, the o-derivs. of I must be prepd. by the Braun method. IV was also obtained with good yields by direct nitration of I with an equimol. amt. of $BzNO_3$, the reaction proceeds with practically no formation of the o-isomer. PhC_2H_4Cl, b_{18} 95.6° (69.0 g.), treated gradually, with stirring, with a mixt. of 52.2 g. HNO_3 (d. 1.5) and 104.4 g. of concd. H_2SO_4 at 5°, gave 91% of III and V. By fractionation and freezing there were isolated 30.0% V, b_{18} 156.5-8°, d_{20} 1.248, n_D^{20} 1.562, and III, b_{18} 172.5°. V, oxidized with $KMnO_4$, gave o-$O_2NC_6H_4CO_2H$, m. 144.5°. o-$BzNHC_6H_4C_2H_4Cl$ (VI), m. 119-20°, was obtained in nearly 100% yield by triturating 1 g. $ClC_6H_4C_6H_4NH_2$ HCl (cf. Braun, *loc. cit.*) with 0.9 g. BzCl and 0.9 g. K_2CO_3 in 5 cc. H_2O. o-$BzNHC_6H_4C_2H_4Ph$ (VII), m. 157-8.8°, resulted in nearly 100% yield, when a mixt. of 10 g. VI, 40 cc. C_6H_6 and 50 cc. CS_2 was digested first with the addn. of 10 g. $AlCl_3$ at 50-60° for 45 min. and then on further addn. of 10 g. $AlCl_3$ for 2.5-3 hrs. in a boiling water bath. o-$H_2NC_6H_4C_2H_4Ph$ (VIII), b_{18} 138-43°, d_{20}^{20} 1.013, n_D^{20} 1.5935, was obtained in 50% yield by decomp. VII with 5 parts of a mixt. of equal parts of alc. satd. with HCl and concd. H_2SO_4, and subsequent decompn. of the HCl salt with 10% KOH. IV, m. 70-1°, was obtained (1) in 40% yield from III and C_6H_6 by the method of condensation used in the prepn. of VII (VIII), (2) with 57.7% yield by allowing a mixt. of 15 g. I, 17.5 g. $BzNO_3$ and 40 cc. CCl_4 to stand at a room temp. for 72 hrs. The cryst. mass was dissolved in Et_2O, and after washing the soln. with H_2O and Na_2CO_3 and expelling the Et_2O, the residue was fractionated *in vacuo*. Chas. Blanc

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CA

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Action of aromatic nitro compounds on arylmagnesium halides. / D. N. Kursanov and P. A. Sokolkov. *J. Gen. Chem.* (U. S. S. R.) 5, 1487-93(1935). Modification of the Gilman and McCracken interpretation (C. A. 31, 1800) of the mechanism of the reaction of $ArNO_2$ with $ArMgX$ (X = a halogen) with the formation of diaryls and diarylamines is based on the exptl. evidence of the intermediate formation of phenols: $RNO_2 + R'MgX \rightarrow RR'N(O)OMgX$ (+ $R'MgX$) $\rightarrow RR'NOMgX + R'OMgX$, $RR'NOMgX + 2R'MgX \rightarrow RR' + RR'NMgX + (MgX)_2O$, and the summation formula: $RNO_2 + 4R'MgX \rightarrow RR'NMgX + R'OMgX + RR' + (MgX)_2O$. Diarylamines and phenols are formed by hydrolysis of $R'R'NMgX$ and $R'OMgX$, resp. The condensation was carried out in the cold by a slow addn. of 15.4 g. $PhNO_2$ in Et_2O to PhMgBr (from 78.5 g. PhBr and 12 g. Mg) in a H atm., giving 63% PhOH, 50% Ph_2 and 63% Ph_2NH of the theory according to the above formula. o-$C_6H_4NO_2$ with PhMgBr gave 64% PhOH, 62% Ph_2 and 48.6% o-C_6H_4NHPh, m. 58.5-60.5° (ligroin). $PhNO_2$ with o-C_6H_4MgBr gave 44.3% o-C_6H_4OH, and with p-MeC_6H_4MgBr 54.6% p-MeC_6H_4OH, 60% p,p'-bitolyl and 60.3% MeC_6H_4NHPh, m. 88.3-9°. Chas. Blanc

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BC

a-1

Parachors of polycyclic compounds. II. D. N. Kurzanov and V. S. Goriavschev (J. Gen. Chem. Russ., 1937, 7, 1098—1101; cf. A., 1935, 15).—The parachors of monocyclic compounds with a double linking are in agreement with theory, whilst those of similar dicyclic compounds are consistently < theoretical.

R. T.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

10

Action of azoxy compounds on arylmagnesium halides. D. N. Kursanov, A. S. Kursanova and A. N. Blokhina. *J. Gen. Chem.* (U. S. S. R.) 8, 1785-90(1938); cf. C. A. 30, 2181[8].—ArMgX (X = halogen) react with azoxy compds. (I) with the formation of biaryls and the reduction of I to azo derivs.: RN:O:NR + 2R'MgX = RN:NR + R'$_2$ + $(MgX)_2O$. No hydrazo derivs. are formed. Aliphatic-aromatic Mg compds. give lower yields of biaryls, which are again increased with a greater no. of aryl radicals in the Mg compds. Thus, $PhCH_2MgCl$ gives only 36.3% $(PhCH_2)_2$ and $Ph_2CHMgBr$ gives 71.7% $(CHPh_2)_2$. Alkylmagnesium halides react with I differently, forming but little bialkyls. The mechanism of this reaction is being investigated. The condensation was carried out by adding 6.4 g. (0.032 mol.) azoxybenzene (II) in 15 ml. Et_2O to PhMgBr (from 10 g. PhBr (0.032 mol.) in 15 ml. Et_2O) and digesting the mixt. on the water bath for 1 hr. After the usual hydrolysis, the Et_2O soln. was successively extd. with 10% KOH and 10% HCl and the Et_2O residue was washed with H_2O and dried with K_2SO_4. The acid ext., treated with excess KOH and steam-distd., gave 0.2 g. $PhNH_2$. The alk. ext. contained 0.3 g. PhOH, identified as tribromophenol. The Et_2O soln., freed from the Et_2O and the residue (8.7 g.) redistd. and recrystd., gave 95.8% $(PhN:)_2$ (III) and 64.4% Ph_2. $Ph_2CHMgBr$ (from 40 g. Ph_2CHBr) and 16.4 g. II in Et_2O on refluxing for 4.5 hrs. and treating the reaction product as above gave 71.7% $(CHPh_2)_2$, m. 205-6°, and 66.3% III identified as $PhNH_2$ by reduction with $SnCl_2$ as usual. α-$C_{10}H_7MgBr$ (from 40 g. α-$C_{10}H_7Br$) and 19.1 g. II gave 56.3% binaphthyl, m. 157-8°, and III. The III yield and the presence of other reaction products were not detd. From *p,p'*-azoxytoluene and PhMgBr 83.5% Ph_2 and 60.1% azotoluene, m. 143.5-4°, were formed. The reaction of $PhCH_2MgCl$ (from 85 g. $PhCH_2Cl$) and 50.5 g. II gave 30.3% $(PhCH_2)_2$, m. 51-2°, and 73.8% III. *p*-MeC_6H_4MgCl and II gave *p,p'*-bitolyl. Chas. Blanc

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1. KURSANOV, D. N. , ZELVYN, R.R.

2. USSR (600)

"The Action of Complex Exters of Aliphatic Acids on Benzene in the Presence of Aluminim Chloride," Zhur. Obshch. Khim.,9 No. 23, 1939. Lab of Organic Chem., Moscow Textile Inst. Received 5 July 1939

9. [redacted] Report U-1626, 11 Jan 1952.

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Friedel and Crafts reaction of aliphatic esters with benzene. D. N. Kursanov and R. R. Zel'vin. *J. Gen. Chem.* (U. S. S. R.) 9, 2173-8(1939).—The reaction of 0.45 mol. alkyl ester with 2 mols. of dry C_6H_6 in the presence of 0.67 mol. $AlCl_3$ was studied by refluxing the mixt. on a water bath for 5 hrs. until the liberation of HCl had stopped, decomp. the reaction mixt. with iced water and redistg. the product. Under these conditions AcOEt yielded 44% PhEt, 21% *p*-EtC_6H_4Ac (*semicarbazone*, m. 189-0.5°), some isomeric $C_6H_4Et_2$ and a cryst. product $C_{10}H_{14}O$, m. 182.5°, the nature of which is being investigated. AcOPr gave 31.7% PhPr and PrC_6H_4Ac (*semicarbazone*, 187.3-8.5°). AcOBu gave 31.8% PhBu and 9.1% BuC_6H_4Ac (*semicarbazone*, m. 180.5-90.5°). HCO_2Et formed no ketone and yielded 63.3% PhEt and 12.5% $C_6H_4Et_2$. In some expts. the latter reaction was accompanied by formation of *sym*-$C_6H_3Et_3$, bp. 216-17°, in yields up to 35.1%. $ClCH_2OAc$ and AcOMe failed to react. The probable mechanism of the formation of alkylated aromatic-aliphatic ketones and mono- and polyalkylbenzenes is the cleavage of the ester by the action of $AlCl_3$ and the condensation of the resulting decomp. products with C_6H_6. $RCO_2R' + AlCl_3 = RCO_2AlCl_2 + R'Cl$. The formation of a haloalkyl probably dets. the compn. of the ketone. Groggins, *et al.* (*C. A.* 29, 1072[9]), similarly conceived the condensation of carboxylic acids with aromatic hydrocarbons by the intermediate formation of RCO_2AlCl_2.

Chas. Blanc

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A certain complicated case of anomaly in the Grignard reaction. D. N. Kursanov and P. A. Sokolkov. *Compt. rend. acad. sci. U. R. S. S.* 27, 797-800(1940)(in English). --In the reaction of cyclopentylmagnesium chloride with BzH there was obtained, besides the normal product, 0.9 g. (from 8 g. of C_5H_9Cl) of 1,3-dibenzylidenecyclopentanone. That the latter substance was due to oxidation of the C_5H_9MgCl and reaction of this oxidation product with the aldehyde is indicated by the following expts. In each of which the cyclanol was added to MeMgI in dry ether, followed by the addn. of the aldehyde (2 mols. aldehyde per mol. of cyclanol) after the CH_4 had been evolved, and the mixt. was allowed to stand until the next day when it was hydrolyzed with acid (NH_4Cl in the case where furfural was used) and the ketone or other products sepd. after removal of the ether by distn. Cyclopentanol (8.6 g.) and 31.8 g. BzH yielded 17.6 g. 1,3-dibenzylidenecyclopentanone, m. 189-90°, and 3.2 g. benzyl alc. (*p*-nitrobenzoate, m. 82.8-84°). Cyclohexanol (20.2 g.) and 63.6 g. BzH yielded 25.9 g. 1,3-dibenzylidenecyclohexanone, m. 115.5-17°, and 10.5 g. benzyl alc. Cyclohexanol (10 g.) and 45.3 g. *m*-$O_2NC_6H_4CHO$ yielded 3.8 g. cyclohexanone (semicarbazone, m. 165.6°), 3.2 g. of di-*m*-nitrobenzylidenecyclohexanone, m. 191-2°, and 9.56 g. of *m*-nitrobenzyl alc., b_{14} 157° (benzoate, m. 69-9.5°). Cyclohexanol (30 g.) and 80.4 g. furfural yielded 14.3 g. difurfurylidenecyclohexanone, m. 145.5-6°, and 9.3 g. of furfuryl alc. (Ph_3C ether, m. 139.5-40.5°). When 10%, 30% and 50% of the Mg iodoalcoholate of cyclohexanol and 30% of the Mg iodoalcoholate of benzyl alc. were added to mixts. consisting of 1 mol. cyclopentanone and 2 mols. BzH and the mixts. allowed to stand 48 hrs., the yields of 1,3-dibenzylidenecyclopentanone were 15.4%, 49.6%, 47.7% and 55.9%, resp., indicating that the Mg alcoholate was the condensation agent for the ketone and aldehyde.

George Avery

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New type of condensation reaction under the influence of aluminium chloride. D.N. Kursanov and R.R. Zelvin (Compt. rend. Acad. Sci. U.R.S.S., 1942, 36, 17-21).-Contrary to Tzukervanik et al. (A., 1937,II,331) the condensation product ($AlCl_3$) of EtOH with C_6H_6 has m.p. 179°. This and the product from HCO_2Et, EtOAc' or $CH_2Cl.CO_2Et$ with C_6H_6 and $AlCl_3$ or PhEt with $AlCl_3$ is 9: 10-dimethylanthracene, hydrogenated (Pd-black) to 9: 10-dimethyl-1;2:3:4:9:10:11:12-octakydroanthracene, m.p. 140-141.5°. F.R.G.

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Action of $AlCl_3$ on (nitramino)pyridine in the presence of benzene. D. N. Kursanov and E. A. Ignat'eva. *J. Gen. Chem.* (U. S. S. R.) 13, 62-7(in English, 67)(1943); *cf. C. A.* 37, 1422[4].—The authors studied the action of (nitramino)pyridine with $AlCl_3$ in $PhNO_2$, hexane and benzene. In the first 2 solvents the reaction mixt. evolved gases, which included HCl at room temp.; definite compds. could not be isolated from the tarry reaction masses. The reaction in benzene was studied in 2 ways. Dry benzene (230 cc.) and 157 g. $AlCl_3$ were mixed and gradually treated with the nitramine (one-third molar amt. in relation to $AlCl_3$); the reaction was completed by warming on a water bath until gas evoln. ceased; the mixt. was hydrolyzed and treated with HCl. On working up, there was obtained 3-phenyl-1-methylcyclopentane, b_{11} 105-111° (with perhaps an admixt. of phenylcyclohexane), 2-chloropyridine (identified as 2-iodopyridine-MeI by heating with MeI in a sealed tube), 2-phenylpyridine, and phenyl-1-pyridylamine. A repetition of the expt. was made in which a CO_2 atm. was used and the reaction gases were collected; they amounted to 20.7-22.4 l. per mol of the nitramine and they were essentially N and O, with only traces of nitric acid vapor. The mechanism of the reaction is discussed, with the possible entrance of the aciform of the nitramine into the reaction. G. M. Kosolapoff

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Semicyclic double bonds. Behavior of cyclohexylidene compounds to the action of several reagents capable of addition to normal double bonds. D. N. Kursanov and A. S. Kursapova. *J. Gen. Chem.* (U. S. S. R.) 13, 184-8 (1943)(English summary); cf. *C. A.* 31, 7420[9].—The authors continue their study of the semicyclic double bonds (double bonds between aliphatic and ring C atoms) by expts. with Diels-Alder type reagents. Cyclopentadiene (0.8 g.) and 1 g. cyclohexylideneacetic acid in 5 cc. abs. Et_2O were refluxed for 4 hrs.; no condensation was effected; similar results were observed in sealed-tube expts. up to 165°. Ag cyclohexylideneacetate and MeI gave *Me cyclohexylideneacetate*, b_{20} 120-6.5°, n_D^{20} 1.4832, d_4^{20} 0.9969; this showed no action with CH_2N_2 and practically none with N_2CHCO_2Et; with MeMgI it yielded 87% of *1-cyclohexylidene-2-methylpropene*, b_{20} 103-3.5°, d_{20} 0.8528, n_D^{20} 1.4625; this hydrocarbon spontaneously polymerized to a jelly in 10 days; when heated with acrolein on a water bath it yielded only its own polymer and some acrolein dimer, but no condensation product. Thus, the semicyclic double bond appears to hinder the usual Diels-Alder type condensations.

G. M. Kosolapoff

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3RD AND 4TH ORDERS

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Cd

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Rearrangement of aryl amides of aromatic and aliphatic acids under the action of $AlCl_3$. D. N. Kursanov. *J. Gen. Chem.* (U. S. S. R.) 13, 290 9(1943)(English summary).—K. found that aryl amides of aromatic and aliphatic acids rearrange under the action of $AlCl_3$ into p-NH_2 ketones; the reaction apparently proceeds through cleavage of amides. Ten g. AcNHPh and 25 g. $AlCl_3$ were heated for 1 hr. at 200°, followed by treatment with ice; 30 cc. HCl was added and the mixt. boiled for 2 hrs., followed by addn. of alkali and extn. with Et_2O; 1.2 g (12%) p-$H_2NC_6H_4Ac$, m. 105.8-6.2° (from EtOH), was isolated; Ac deriv., m. 168-9°. H_2NHPh (43 g.) and 80 g. $AlCl_3$ were heated at 200° for 5 hrs.; after the usual hydrolysis 5% (2 g.) of p-$H_2NC_6H_4COPh$, m. 120-2.5° (from EtOH), was isolated; Ac deriv. m. 154-5°; Bz deriv., m. 181-2°. AcNHPh (18 g.), 30 g. MePh and 45 g. $AlCl_3$ were heated in a sealed tube to 200° for 2 hrs.; after treatment with ice and HCl, there was isolated 16.2% (2.9 g.) methylacetophenone, b_{10} 95-120°; semicarbazone, m. 203.5-5°, which corresponds to that of p-MeC_6H_4Ac.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Hydrophobic cellulose. I. Preparation and properties of chloromethyl ethers of the aliphatic series. D. N. Kursanov and V. N. Setkina. *J. Applied Chem.* (U. S. S. R.) 16, 36-46(1943)(English summary).—In the course of the study of the interaction of compds. of the Velan type for water-repellent treatment of cellulose the authors studied the prepn. and properties of various chloromethyl ethers. By means of polyoxymethylene, HCl gas and the corresponding alcs., the following ethers were prepd.: $BuOCH_2Cl$ (80.6%), b. 131°, $C_8H_{17}OCH_2Cl$ (30%), b. 217-18°; for higher alcs. benzene soln. satd. with HCl was used and the following ethers prepd.: $C_{10}H_{21}OCH_2Cl$ (90.2%) b_{10} 124-5°, $C_{12}H_{25}OCH_2Cl$ (85%), b_5 110-21.5°, $C_{14}H_{29}OCH_2Cl$ (90.4%) b_5 171-2°, $C_{16}H_{33}OCH_2Cl$ b_{1-2} 158°, m. 29-30°; $C_{22}H_{45}OCH_2Cl$, b_{2-4} 197-211°; *mixed alcs. from sperm oil* yielded an ether b_{1-2} 160-80°, *alcohols from hydrogenated linseed oil* gave an ether b_{2-4} 157-87°. All of these ethers readily condensed with pyridine by mixing the reactants with cooling; the products, being poorly sol. in Et_2O, are readily purified by washing with Et_2O. They are all sol. in water, the higher members forming opalescent solns. The octadecyl ether was also condensed with Me_3N in benzene soln. the product being insol. in benzene, sol. in water. $PhNMe_2$ was used in a condensation with the tetradecyl ether; only 50% yield of product was obtained even after 24 hrs. Samples of cloth were treated with aq. solns. of these ethers contg. NaOAc, dried, heated at 105° for 30 min., laundered and washed with benzene and water. Compds. of C_{14} or higher alcs. imparted definite water repellence to cloth. Similar treatment in benzene-pyridine soln. showed that compds. based on Me_3N required a temp. of 140° for chemical binding to cellulose, the degree of water repellence being essentially unaffected by the nature of the nitrogenous base used.

G. M. Kosolapoff

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A new method for the preparation of colored derivatives of cellulose D. N. Kursanov and P. A. Sokolkov (*Izvestiya Akad. Nauk SSSR, Otdel. Khim. Nauk* 1946, 5-6: 1-10). The interaction of pyridine salts of chloromethyl ethers with cellulose of a chem. nature. On this basis a no. of colored derivs. of cellulose were made. Polyoxymethylene (4 Mg.) was mixed with 6 g. *m*-nitrobenzyl alc. in 35 cc. benzene and treated with dry HCl for 2 hrs. with stirring; after standing overnight, the upper layer was sepd. and fractionated to yield 45.7% *m-nitrobenzyl chloromethyl ether*, b.p. 147.5-8.5°, which treated with pyridine gave the corresponding pyridinium compd. in 90.5% yield. A 2% soln. of the product in water contg. 0.7% NaOAc was used for impregnation of cotton fabric, which was squeezed out, dried at room temp. and heated to 125° for 10 min. A control batch was left without heat treatment. Both samples were then subjected in turn to laundering, extn. with benzene, reduction by Na hyposulfite, extn. with 50% AcOH, diazotization and coupling with alk. soln. of β-naphthol, followed by boiling in soap soln., washing and drying. As a result the heat treated samples were permanently pigmented, while the unheated samples were rendered colorless. The result was confirmed by decolorizing the product on the cloth by drastic treatment with Na hyposulfite and subjecting to repeated diazotization and coupling, which restored the color. *m*-Aminobenzyl alc. (6.6 g.) in 15 cc. AcOH and 5 g. $PbNO_3$ in 15 cc. AcOH were mixed, after 30 min. the mixt. was poured into water and the org. layer, after washing with dil. HCl and water, was dried and distd. to yield 69% *m-NH₂C₆H₄CH₂OH*, b.p. 181-4°, m. 34-5°, which was converted in the usual manner into the corresponding chloromethyl ether, b.p. 165-80°, which in turn was converted into the *pyridinium compd.* by heating on the water bath with pyridine for 3 hrs., followed by standing overnight. The product is not substantive to cellulose in the cold, but samples of cotton immersed in 2% soln. in water contg. 0.7% NaOAc, dried at room temp. and heated for 10 min. to 125° yield colored cloth which resists org. solvents. G. M. K.

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REARRANDEMENT of arylamides of aromatic and aliphatic acids under the action of aluminium chloride. D.N. Kursanov (J. Gen. Chem.Russ., 1943, 19, 286-289).-NHPhAc and NHPhBz with $AlCl_3$ at200° for 1 hr. and 5 hr. respectively give tarry products containing p-$NH_2C_6H_4COR$ [R—Me (12%), R-Ph (5%)]. NHPhAc and$AlCl_3$, in presence of PhMc at 200°in a sealed tube for 2 hr., yield 16.2% of p-C_6H_4MeCOMe, indicating that the rearrangement proceeds through preliminary cleavage of the acyl group. R.C.P.

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KURSANOV, D. N.

Exchange and cleavage reactions in quaternary ammonium salts. Reaction of alcohols with quaternary onium salts of the type $ROCH_2NX$. D. N. Kursanov, V. N. Setkina, and V. M. Rodionov. *Bull. acad. sci. U.R.S.S., Classe sci. chim.* 1948, 228-35. Heating (alkoxymethyl)pyridinium chlorides or (alkoxymethyl)quinolinium chlorides with alcs. results in an exchange reaction which yields $ROCH_2OR'$ and pyridine (or quinoline)-HCl. If the resulting formals are not symmetric, the reaction is complicated by symmetrization of the formals. (Butoxymethyl)pyridinium chloride (30.3 g.) and 11.1 g. BuOH heated 4 hrs. to 130°, cooled, and treated with 100 ml. H_2O gave 85.3% *dibutylformal*, b. 181°; the reaction does not proceed at 50°. Heating 9.4 g. tetradecyl alc. and 16 g. (tetradecyloxymethyl)pyridinium chloride 4 hrs. to 135° gave 95.3% *ditetradecylformal*, b_{10} 270-80°, m. 42.2° (from Me_2CO). A similar reaction using AmOH gave 27.8% *diamylformal*, b_{10} 99°, 47.2% *amyltetradecylformal*, b_5 208°, and 25% *ditetradecylformal*. Heating 20 g. (octyloxymethyl)pyridinium chloride and 5.7 g. BuOH gave 27.3% dibutylformal, b_{10} 179°, 48.5% *butyloctylformal*, b_5 119-20°, and 24.2% *dioctylformal*, b_5 176°. Heating 10.7 g. (isoamyloxymethyl)pyridinium chloride and 4.4 g. iso-AmOH 2 hrs. at 140° gave 89% *diisoamylformal*, b_{10} 205°. Heating 9.6 g. (nonyloxymethyl)quinolinium chloride and 4.3 g. nonyl alc. 4.5 hrs. at 150-60° gave 84% *dinonylformal*, b_5 1[illegible]-60°. Heating 15 g. $C_{10}H_{21}OH$ and 15 g. dibutylformal 8 hrs. to 14[illegible] gave 2.7 g. BuOH, 6.8 g. dibutylformal, [illegible] g. $C_{10}H_{21}OH$, 6.9 g. *butyldecylformal*, b_{10} 164-6°, and 2.6 g. *didecylformal*, b_{10} 210-16°. Similarly, 9 g. dibutylformal and 14.8 g. MeOH heated 10 hrs. in a sealed tube to 16[illegible] gave 2 g. dimethylformal, 4.5 g. MeOH, 6 g. methylbutylformal, b. 76-7°, 5.7 g. BuOH, and 3.2 g. dibutylformal. Heating 9.4 g. dibutylformal and 16.1 g. EtOH 10 hrs. to 150° gave no disproportionation; use of PrOH gave the same result. Diisoamylformal undergoes exchange with octyl, decyl and tetradecyl alcs., but not with EtOH or PrOH, although MeOH does react, as an exception.

G. M. Kosolapoff

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NESMEYANOV, A.N., akademik; KURSANOV, D.N.; SETKINA, V.N.; KISLYAKOVA, N.V.; KOCHETKOVA, N.S.; MATERIKOVA, R.B.

Hydrogen isotope exchange of cyclopentadienylmanganesetricarbonyl. Dokl. AN SSSR 143 no.2:351-353 Mr '62. (MIRA 15:3)

1. Institut elemento-organicheskikh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Kursanov).
(Hydrogen--Isotopes)
(Cyclopentadiene)

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KURSANOV, D. N.

USSR/Chemistry - Acetonitrile
Chemistry - Mixtures

Jan/Feb 1948

"Some Physical Qualities of a Mixture of Acetonitrile With Water, and the Azeotropic Mixture of Acetonitrile - Water," A. L. Liberman, Z. N. Parnes, D. N. Kursanov, Inst of Org Chem, Acad Sci USSR, 5 pp

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 1

Describes experiments and research that show the nature of the azeotropic mixture of acetonitrile with water at atmospheric pressure, and establish its composition and physical qualities.

PA 66T30

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