FILIPPOV, Boris Nikolayevich; ALKESANDROV, Mark Veniaminovich; MARUSHKO,
Fedor Ivanovich; MARENKOVA, G.I., inzh., red.; MEDVEDEVA, M.A.,
tekhn.red.

[Experience in the regulation and maintenance of a centralized
traffic relay system] Opyt regulirovki i soderzhaniia marshrutno-
releinoi tsentralizatsii. Moskva, Gos.transp.zhel-dor.izd-vo,
1960. 28 p. (MIRA 13:3)
(Railroads—Signaling)

LUPAL, N.V., kand.tekhn.nauk; GUDKOV, A.V., inzh.; MARUSHKO, F.I., kand.
tekhn.nauk

Operational and technical requirements for the automation of
centralized traffic control. Zhel.dor.transp. 43 no.2:46-47
F '61.   (MIRA 14:4)
     (Railroads—Signaling—Centralized traffic control)
               (Automatic control)

GUDKOV, A.V., inzh.; MARUSHKO, F.I., kand.tekhn.nauk; EYLER, A.A., kand. tekhn.nauk

Over-all automation of mine haulage. Mekh.i avtom.proizv. 16 no.4:56-58 Ap '62.   (MIRA 15:4)
         (Mine haulage)   (Automation)

MARUSHKO, I.A. (Marushko, I.O.)

Effect of anharmonic vibrations of the lattice on the intensity
of the Mössbauer line. Ukr. fiz. zhur. 8 no.8:835-843 Ag '63.
(MIRA 16:11)

1. Dnepropetrovskiy gosudarstvennyy universitet.

MARUSHKO, I.A. [Marushko, I.O.]; MACHKEVICH, V.I. [Mach...]

Generation of the second optical harm... ... Ukr. fiz. zhur. 1? no.3:311-312 Mr '65.

1. Institut fiziki AN Ukr.SR, Kiyev.

MARUSHKO, I.A.; MASHKEVICH, V.S.

Line width of induced Raman scattering. Opt. i spektr. 19 no.1:136-138 Jl '65.   (MIRA 18:8)

L 20422-66   FBD/EWT(1)/EEC(k)/T/EWP(k)/EWA(h)   LJP(c)   WG
ACC NR: AP6004412   SOURCE CODE: UR/0051/66/020/001/0117/0127

AUTHOR: Marushko, I. A.; Mashkevich, V. S.

ORG: none

TITLE: A method of kinetic equations in the theory of second-harmonic generation

SOURCE: Optika i spektroskopiya, v. 20, no. 1, 1966, 117-127

TOPIC TAGS: laser, nonlinear optics, second harmonic, harmonic generation, spectral line, line broadening

ABSTRACT: A theoretical study is made of second-harmonic generation in a stationary regime by a laser beam of finite spectral width. The method of kinetic equations used was developed by the author (Ukrainskiy fizichnyy zhurnal, v. 8, 1963, p. 918, and v. 9, 1964, p. 226) and is based on quantum mechanical considerations. The spectral line is represented by a set of monochromatic lines corresponding to exact normal oscillations of the electromagnetic field distributed with a certain density. General expressions for the total probability of second-harmonic generation are used in deriving an expression for the angular distribution of intensity of the second harmonic in reflected and transmitted rays. It is shown that the dependence of the intensity of the second harmonic on the angle of incidence will be oscillatory. In the case of normal incidence, the line shape of the second harmonic is expressed by an integral equation which is solved for the cases when the shape of the pump line is

Card   1/2   UDC: 621.375.9.535.001.1

L 20422-66

ACC NR: AP6004412

either Gaussian or Lorentzian. It is shown that generation of a harmonic usually results in broadening of the fundamental. When the pump line is Gaussian, the second harmonic exhibits a tendency for narrowing. Orig. art. has: 22 formulas and 2 figures.   [CS]

SUB CODE: 20/ SUBM DATE: 10Sep64/ ORIG REF: 008/ OTH REF: 005/ ATD PRESS:
4222

Card 2/2 UL R

L 01059-67   EWT(1)/T   IJP(c)   GD

ACC NR: AT6015131   SOURCE CODE: UR/0000/66/000/000/0034/0076

AUTHOR: M; rushko, I. A.; Mashkevich, V. S.

ORG: Institute of Physics, AN UkrSSR (Institut fiziki AN UkrSSR)

TITLE: Method of kinetic equations in the theory of generation of optic harmonics

SOURCE: Respublikanskiy seminar po kvantovoy elektronike. Kvantovaya elektronika (Quantum electronics); trudy seminara. Kiev, Naukova dumka, 1966, 34-76

TOPIC TAGS: laser theory, solid state laser, kinetic equation

ABSTRACT: 1. Deduction of kinetic equations from a density-matrix equation for the case of generation of the second optical harmonic. Only stationary conditions of generation and only the process of frequency summation are considered. The analysis is made in the first nonvanishing approximation of the disturbance theory; contribution of multiphoton processes is neglected. The kinetic equations are:

$$\dot{\bar{q_1}} = \frac{2\pi}{\hbar} B \sum_{l,\,k} [\bar{q_2^l}(\bar{q_1^l}+1)(\bar{q_1^k}+1) - (\bar{q_2^l}+1)\bar{q_1^l}\,\bar{q_1^k}] \, \delta(E_l + E_k - E_j) - \alpha_1^l \bar{q_1^l} + N^l.$$

$$\dot{\bar{q_2}} = \frac{\pi}{\hbar} B \sum_{l,\,k} [(\bar{q_2^l}+1)\bar{q_1^l}\bar{q_1^k} - \bar{q_2^l}(\bar{q_1^l}+1)(\bar{q_1^k}+1)] \, \delta(E_l + E_k - E_j) - \alpha_2^l \bar{q_2^l}.$$

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ACC NR: AT6015131

Applicability of these equations to near-stationary conditions of generation is briefly discussed. 2. Generation of the second harmonic in a plane-parallel slab. It is clarified which field vector potential should be used for calculating the nonlinearity B in the above kinetic equations. In each particular case of solving the kinetic equations, construction of orthonormalized solutions of the Maxwell linear equations is required. Kinetic equations and total-quanta-number equations for the second-harmonic generation in the slab are derived. From them, this formula for efficiency is derived: $k = \dfrac{a_1(\varepsilon_2^R + \varepsilon_2^T)}{N\hbar\omega_1} = \dfrac{2a_2(q_2^R + q_2^T)}{N}$. The second-harmonic intensity in the transmitted and reflected light dependent on the angle of incidence (formula given) is convenient for determining the degree of agreement between the calculated and observed data. 3. Line shape in the second-harmonic generation with a specified pumping at fundamental frequency. The above generation case is also used for investigating the line shape. An integral equation describing the time shape is solvable only in two particular cases: (A) Gaussian curve (weak and strong generation regions); and (B) Lorentzian curve (weak generation). 4. Second-harmonic generation in the laser resonator. The harmonic generation depends on the nonlinearity $\overline{B}$, photon density q_1 in the beam, and the loss ratio at fundamental and harmonic frequencies. Hence, an efficient harmonic generation can be achieved by

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L 01059-67

ACC NR: AT6015131

placing the nonlinear crystal into the laser resonator. The generation efficiency is equal to a ratio of the harmonic power to the dominant-mode-plus-harmonic power:

$$k = \frac{\alpha_2 2\hbar\omega_1 q_2}{\alpha_1 \hbar\omega_1 q_1 + \alpha_2 2\hbar\omega_1 q_2} = \frac{2\alpha_2 q_2}{\alpha_1 q_1 + 2\alpha_2 q_2} = \frac{2\alpha_2 \bar{B} q_1}{2\bar{B} q_1 (\alpha_1 + \alpha_2) + \alpha_1 \alpha_2}.$$ To find the effect of laser pumping

on the harmonic efficiency, the dominant-mode equation is solved for these cases: (A) The near above-threshold pumping region for which this condition holds true:

$$|\alpha_2 \overset{\circ}{B}_s (m_1 - n^{11}) - 2\bar{B}B_r n^{11}|^2 \gg 8\bar{B}B_s B_r n^{11} \alpha_1 (m_1 - n^{11});$$ (B) The pumping region in which this

condition is satisfied: $|\alpha_2 \overset{\circ}{B}_s (m_1 - n^{11}) - 2\bar{B}B_r n^{11}|^2 \ll 8\overset{\circ}{B}_s B_r n^{11} \alpha_1 (m_1 - n^{11}).$ (C) The strong

pumping region with this condition satisfied: $|\alpha_2 \overset{\circ}{B}_s (m_1 - n^{11}) - 2\bar{B}B_r n^{11}|^2 \gg 8\bar{B}B_r n^{11} \alpha_1 (m_1 - n^{11}),$

$$m_1 - n^{11} < 0.$$

5. Generation of the third optical harmonic. The kinetic equations, the law of conservation of the number of quanta, the line shape, and the efficiency of third-harmonic generation are discussed. Orig. art. has: 2 figures and 210 formulas.

SUB CODE: 20 / SUBM DATE: 12Feb66 / ORIG REF: 010 / OTH REF: 010

awm

Card 3/3

L-1817-65   EWA(k)/EWT(1)/EEC(k)-2/T/EEC(b)-2/EWP(k)/EWA(m)-2   Po-4/Pf-4/Pi-4/
Pi-4   IJP(c)/RAEM(1)/ESD(t)   G/JHB

ACCESSION NR: AP4044177   S/0185/64/009/008/0921/0925   B

AUTHOR: Marushko, I. O.; Mashkevy*ch, V. S.

TITLE: Generation of the second harmonic in a plane-parallel plate

SOURCE: Ukrayins'ky*y fizy*chny*y zhurnal, v. 9, no. 8, 1964, 921-925

TOPIC TAGS: second harmonic, plane parallel plate, nonlinear Maxwell equation,
quantum transition

ABSTRACT: Several papers were dedicated to the derivation of the generation of
the second harmonic on the basis of the nonlinear Maxwell equations. The pre-
sent paper derives the same results by the method of quantum transitions.
Orig. art. has: 2 figures, 11 equations

ASSOCIATION: Institut fiziki AN URSR i Kiev (Institute of physics AN URSR)

SUBMITTED: 15Apr64   ENCL: 00

Card 1/3

L 14817-65

ACCESSION NR: AP4044177

SUB CODE: ME   NO REF SOV: 002   OTHER: 008

Card 2/2

S/0185/64/009/010/1146/1150

ACCESSION NR: AP4048871

AUTHOR: Harushko, I. O.; Hashkevych, V. S.

TITLE: Form of the line while generating the second optical harmonic

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 9, no. 10, 1964, 1146-1150

TOPIC TAGS: second optical harmonic, second harmonic, principal frequency, spectral width of radiation

ABSTRACT: In problems concerning the generation of the second harmonic, the field of the fundamental frequency was regarded as a plane monochomatic wave. Laser radiation, which is suited to generating harmonics, has a finite spectral width. The generation of the second harmonic in a stationary regime when the shape of the line of pumping at the fundamental frequency is given, was investigated. In addition, a line with finite width was regarded as a combination of monochromatic lines which correspond to normal oscillations of the electromagnetic field distributed with appropriate density. It is shown that corresponding monochromatic lines

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ACCESSION NR: AP4048871

on the second harmonic appear essentially not on account of
doubling the frequency, but by adding the frequencies of the
principal line distributed symmetrically with respect to the
frequency whose doubled value corresponds to the investigated
harmonic line. It is also shown that the form of the line of the
fundamental changes during the process of generation of the
harmonic. The line on the second harmonic narrows, while the line
on the fundamental frequency widens. Furthermore, the form of
the line of the second harmonic is that which it would be when
the frequency is doubled. The line of the fundamental frequency
widens as before. Orig. art. has: 31 formulas.

ASSOCIATION: Insty*tut fizy*ky*AN URSR, Kiev   (Institute of
Physics, AN URSR)

SUBMITTED: 09Jun64   ENCL: 00   SUB CODE: OP, EC

NO REF SOV: 003   OTHER: 001

Card   2/2

L 34882-65   EWG(j)/EWA(k)/FBD/EWT(1)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/EWA(m)-2/
EWA(h)   Pn-4/Po-4/Pf-4/Pi-4/Pl-4/Peb   IJP(c)   WG

ACCESSION NR: AP5007691   S/0185/65/010/003/0312/0322

AUTHOR: Marushko, I. O. (Marushko, I. A.); Mashkevych, V. S. (Mashkevich, V. S.)

TITLE: Generation of the second optical harmonic in a laser resonator

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 3, 1965, 312-322

TOPIC TAGS: laser, laser resonator, second optical harmonic, harmonic generation,
particular mode, crystal nonlinearity

ABSTRACT: The effect of second harmonic generation on laser operation and the con-
ditions for the most effective transformation of the fundamental frequency into the
harmonic in a continuous-wave mode have been investigated using the kinetic equation
method. A simple laser model with a single mode was used. The effect of the gen-
eration of a harmonic on the particular mode was found to be weak. The number of
second-harmonic quanta clearly depends on the pump power. In the case of very high
pump power, the pumping and losses of the particular mode (a_1) determine the trans-
formation coefficient (k). By reducing a_1, it is possible to obtain a k value close
to unity. In a case corresponding to the saturation of the second harmonic (when
the number of photons in the mode does not depend on the nonlinearity of the crystal),
the radiation of the particular mode depends essentially on the losses of the har-
monic a_2. Only the effectiveness of harmonic generation is determined from the ratio
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ACCESSION NR: AP5007691

of the losses of the fundamental frequency and the harmonic. To limit the radiation of non-particular modes in this region, i.e., to retain the particular mode, the losses of the harmonic a_2 should be restricted. In the region of the strong generation of harmonics, the role of the reverse process (i.e., the transformation of a harmonic into a fundamental frequency) increases, thus reducing the effective losses of the particular mode. A decrease of a_2 furthers the process. Thus, for stable laser operation and maximum generation of a harmonic, an optimum ratio of losses a_1 and a_2 should be selected. Orig. art. has: 27 formulas.   [JA]

ASSOCIATION: Instytut fizyky AN URSR, Kiev   (Physics Institute, AN URSR)

SUBMITTED: 07Jun64   ENCL: 00   SUB CODE: EC

NO REF SOV: 007   OTHER: 004   ATD PRESS: 3212

Card 2/2

L 58969-65   EWT(1)

ACCESSION NR: AP5017905   UR/0051/65/019/001/0136/0138
                                                           621.375.9:535.375

AUTHOR: Marushko, I. A.; Mashkevich, V. S.

TITLE: Line width of stimulated Raman scattering

SOURCE: Optika i spektroskopiya, v. 19, no. 1, 1965, 136-138

TOPIC TAGS: SRS, Raman line, line width, Raman effect laser, nonlinear optics

ABSTRACT: The line width of stimulated Raman scattering (SRS) is investigated under
stationary and quasi-stationary conditions where pumping at the fundamental frequency
is constant with time. The problem was solved by means of the kinetic equations
method derived previously (V. S. Mashkevich, Ukr. fiz. zh. 9, 1032, 1963). The line
shape was assumed to be that of a Lorentz curve. The explicit dependence of the
SRS line width on the pumping was determined for regions above and below the thres-
hold value of the pumping. In the cases considered, as in the usual laser, a sharp
narrowing of the line occurs when pumping is increased beyond the threshold. Orig.
art. has: 5 formulas.   [YK]

ASSOCIATION: none

Card 1/2

L 58969-65
ACCESSION NR: AP5017905

SUBMITTED: 24Nov64   ENCL: 00   SUB CODE: EC, OP

NO REF SOV: 004   OTHER: 003   ATD PRESS: 4048

Card 2/2

MAKSIMIC, M.I.

MAKSIMIC, M.I.: "Experience using antibiotics in the postoperative period in patients with acute appendicitis". Kishinev, 1958, second Moscow State Medical Institute I.V. Stalin. Dissertations for the Degree of Candidate of Medical Sciences.

SO: Knizhnaya letopis' No. ??, Moscow, 1959.

MARUSCIAC, D.; POP, V.; MORUSCA, I.; HOSSU, T.; ALBAC, V.

Study on some methods of soil consolidation in the Cluj region
in view of their utilization in agroz. technical. construction.
Bul stiint polit Cluj 6:171-186 '63.

MARUSIAK, I.; BURES, J.

"Use of the curve of the PS-gradient to determine strata limits."

p. 33 (Prace) No. 31/33, 1956
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
     April 1958

MARUSHIAK, I. [Marusiak, I.]

Complex examination of industrial geophysical materials. Prace
ust naft 18:39 '61.

MARUSIAK, I. [Marusiak, I.]; BURESH, Y. [Buses, J.]

Use of the curve of gradient of internal potentials for
determining the thickness of layers. Prace ust naft 18:40
'61.

MARUSIAK, Ivan

    Electric coring measurement in the Vlachy-1 key borehole.
    Prace Ust naft 20:67-69 '63.

MARUSIAK, Jiri, Dr

Calculi of the seminal vesicles. Cas.lek.cesk. 91 no.11:333-335
14 Mar 52.

1. Z radiologicke kliniky K.U. v Praze; prednosta: prof. dr. Vaclav
Svab.
     (SEMINAL VESICLES, calculi)

MARUŠIAK J. * Hodnocení kostních Zmĕn u časné vrozené syfilis. Evaluation of osseous changes in early congenital syphilis PRAKT. LÉK. 1954, 34/3 (65-66)

The author examined radiographs of long bones of 55 newborns and infants, and found changes characteristic for congenital syphilis in one child only. Some of the mothers of examined children had had specific treatment, some had had none. From these experiences it is concluded, that X-ray examination of the long bones of infants and newborns plays an important part in making a diagnosis of lues connata. But alone it is not sufficient for diagnosis, only with a history, and it should be supplemented by clinical and serological examinations.

<div align="right">Viščorová - Brno (VII, 13)</div>

SO: EXCERPTA MEDICA Sect. XIII Vol. 8 No. II

MARUSIAK, Jiri, MUDr.

Malignant tumors on the site of chronic osteomyelitis.
Acta chir. orthop. traum. cech. 22 no.6:232-234 Nov 55.

1. Radiologicka klinika KU v Praze. Prednosta- Prof. Dr.
Vaclav Svab.
        (OSTEOMYELITIS, complications,
            cancer.)
        (NEOPLASMS,
            in osteomyelitis.)

MARUSIAK, Jiri, MUDr.

Tracheal and bronchial scleroma. Cesk. roent. 10 no.2:65-66
June 56.

1. Radiologicka klinika KU; predn. prof. Dr. Vaclav Svab.
    (TRACHEA, dis.
        scleroma, x-ray aspects (Cz))
    (BRONCHI, dis.
        same)
    (LARYNX, dis.
        same)

MARUSIAK, Jiru, MUDr.

Personal experience with ventriculographic examination in the years 1948 to 1954. Cesk. rentg. 11 no.3:171-175 Aug 57.

1. Venovano akademiku Arnoldu Jiraskovi k 70. narozeninam.
    (VENTRICULOGRAPHY, in var. dis.
        interpretation (Cz))

MARUSIAK, Jiri, Dr.

Differential diagnosis of anterior dislocation of atlas.
Acta chir. orthop. traum. cech. 24 no.2:134-137 Mar 57.

1. Radiologicka klinika Karlovy university, prednosta prof.
Dr. Vaclav Svab.
    (ATLAS AND AXIS, disloc.
        differ. diag. from pathol. disloc. & clin. healed
        spondylitis (Cz))
    (SPONDYLITIS, differ. diag.
        disloc. of atlas (Cz))

MARUSIAK, Jiri

Free fluid in the circulatory system of the fetus as roentgenological manifestation of intrauterine death. Cesk. rentg. 13 no.4:255-256 Aug 59

1. Radiologicka klinika KU, prednosta prof. dr. V. Svab.
(FETUS)

MARUSIAK, Jiri

Roentgenological picture of the sella turcica in advanced internal hydrocephalus. Cesk.rentg. 13 no.6:421-424 D '59.

1. Radiologicka klinika KU, prednosta prof.dr. V. Svab.
        (HYDROCEPHALUS pathol.)
        (SELLA TURCICA radiogr.)

MARUSIAK, Jiri

Contribution to familial neurogenic acroosteolysis. Cas. lek.
cesk. 98 no.32-33:1042-1047 14 Aug 59

1. Radiologicka klinika KU, prednosta prof. dr. Vaclav Svab.
        (BONE DISEASES, case reports)

VRBA, Jiri; MARUSIAK, Jiri

A rare parasitic disease: pentastomiosis. Cesk.rentg. 14 no.5:
297-299 O '60.

1. Klinika chorob z povolani a hygieny prace KU, prednosta prof.
dr. J.Teisinger Radiologicka klinika KU, prednosta prof. dr.
V.Svab.
(PARASITIC DISEASES case reports)
(LUNG DISEASES parasitol.)

MARUSIAK, J.

On the problem of direct magnification of roentgenograms. Acta chir.orthop.traum.cech. 27 no.5:459-463 O '60.

1. Radiologicka klinika KU Praha, prednosta prof. dr. V.Svab.
        (RADIOGRAPHY)

MARUSIAK, Jiri

    Preperitoneal abscess. Cesk. rentg. 15 no.3:188-189 '61.

    1. Radiologicka klinika KU, prednosta prof. dr. V. Svab.

       (PERITONEAL CAVITY dis)   (ABSCESS radiog)

MARUSIC, A.: RADETIC, E.

Economic and financial difficulties of the electric industries of Croatia. p. 3.
(GLASNIK, Vol. 5, No. 4/5, 1956

SO: Monthly List of East European Accessions (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

MARUSIC, Andelko (Zagreb)

Accounting of wages according to efficiency - unit of production - in the electric power economy. Energija Hrv 10 no. 1/2:16-23. '61

1. Zajednica elektroprivrednih poduzeca Hrvatske, Zagreb, Proleterskih brigada 37; clan Urednickog odbora, "Energija," urednik rubrike "Ekonomsko-financijska problematika."

MARUSIC, Andelko (Zagreb)

      Some reminiscences revived by the jubilee of the Hydroelectric-
Power Plant Kraljevac. Energija Hrv 11 no.1/2:34-37 '62.

      1. Zajednica elektroprivrednih poduzeca Hrvatske, Zagreb,
Proleterskih brigada 37.

MARUSIC, BIKARD

14114. (The Imotski Bauxite Region.) Imotsko bokaltno
područje. Bikard Marušić. Rudarsko-Metalurski Zbornik, 1954,
no. 1, p. 46-

Geographical-geological survey and analyses of bauxite de-
posits in remote area. Transportation problem. Maps, tables,
chart. 4 ref.

JAKSIC,Nikica,dr.; MARUSIC,Fedor,dr.; IVANCIC,Nikola,dr.

Observations on prolonged pregnancy. Lijec. vjes. 82 no.4: 307-313 '60.

1. Iz Ginekoloska-parodajnog odjela Opce bolnice Braca dr. Sobola u Rijeci.
          (PREGNANCY)

VRBANIC, Drago, Dr.; MARUSIC, Fedor, Dr.

A case of simultaneous extrauterine pregnancy and intrauterine
hydatiform mole. Lijec vjes 82 no.12:977-981 '60.

1. Iz Ginekolosko-porodajnog odjela Opce bolnice "Brace Dr. Sobol"
u Rijeci.
        (HYDATIFORM MOLE in pregn)
        (PREGNANCY ECTOPIC compl)
        (UTERUS NEOPLASMS in pregn)

KRUSIC, K.

" Contribution to the lingu...
(Vojnosanitetski ...... vich, ..o.. .., no. 1/., .../.
Beograd)

SO: <u>Monthly</u> <u>List</u> <u>of</u> <u>East</u> <u>European</u> <u>Accessions</u>. Vol. 5, no. 3. Library of Congress. March 1954.
Uncl.

MARUSIC, Kazimir, Potpukovnik dr.

A contribution to the clinical picture of toxoplasmosis.
Voj. san. pregl., Beogr. 12 no.7-8:438-442 July-Aug 55.

1. Ocno odeljenje Vojne bolnice u Sarajevu.
    (TOXOPLASMOSIS,
        clin. aspect & symp. ("er))

MARUSIC, Kazimir, Potpukovnik dr.

Application of gonioscopy in ocular trauma. Voj. san. pregl.,
Beogr. 13 no.1-2:18-21 Jan-Feb 56.

1. Ocno odeljenje vojne bolnice u Sarajevu.
     (EYE, wounds and injuries,
         gonioscopy (Ser))
     (WOUNDS AND INJURIES,
         eye, gonioscopy (Ser))

KOPSA, Milan, Potpukovnik doc., dr.; MARUSIC, Kazimir, potpukovnik dr.

Tonography in diagnosis and treatment of glaucoma. Voj. san.
pregl., Beogr. 14 no.1-2:28-37 Jan-Feb 57.

1. Ocna klinika VMA.
      (GLAUCOMA,
            tonography in diag. & ther. (Ser))
      (EYE
            tonography in diag. & ther. of glaucoma (Ser))

KOPSA,Milan,sanitetski pukovnik prof. d-r; MARUSIC,Kazimir,sanitetski
pukovnik d-r

Clinical possibilities for early diagnosis of primary glaucoma.
Voj.san.pregl.,Beogr. 17 no.4:500-504 Ap '60.

1. Klinika za ocne bolesti.
(GLAUCOMA diag.)

MARUSIC, Kazimir, sanitetski pukovnik, dr.

Injuries of ocular tissues by ionizing radiations. Voj.san.pregl.
18 no.4:378-382 Ap '61.

1. Vojnomedicinska akademija u Beogradu, Ocna klinika.

(RADIATION INJURY)   (EYE radiation eff)

MARUSIC, Kazimir, sanitetski pukovnik, dr.

Our experience with gonoscopy in secondary glaucoma. Voj.san.pregl.
18 no.6/7:549-552 Je-Jl '61.

1. Vejnomedicinska akademija u Beogradu, Klinika za ocne bolesti.

(GLAUCOMA diag)

YUGOSLAVIA

MARUSIC, Kazimir, Eye Disease Clinic (Klinika za Ocne Bolesti, Military Medical Academy (Vojnomedicinska Akademija), Belgrade.

"A Contribution to Knowledge of Pigmented Tumors of the Conjunctiva."

Belgrade, Srpski Arhiv za Celokupno Lekarstvo, Vol 90, No 12, December 1962, pp 1160-1170.

Abstract: /Author's French summary/ On the basis of clinical study and histopathology of 12 cases of pigmented tumors of the conjunctiva, the author describes various forms, viz., congenital, precancerous, and cancerous. A lesion preceded the appearance of the tumor in four cases. The article concludes with a few remarks on therapy and surgery.

Eight photographs. 10 references to recent works from Western Europe and US.

1/1

13

KOPSA, Milan, sanitetski pukovnik, profesor, dr.; MARUSIC, Kazimir,
    sanitetski pukovnik, docent, dr.; PANAJOTOVIC, Dragomir,
    sanitetski potpukovnik, dr.

Protection of the organ of vision from war injuries.
Vojnosanit. pregl. 20 no. 1/2:37-41 Ja-F '63.

1. Vojnomedicinska akademija u Beogradu.
        (EYE INJURIES)   (WOUNDS, GUNSHOT)
        (ATOMIC WARFARE)   (WAR)

MARUSIC, M.

Parallel tests of some methods for impregnation of certain textiles to make them more water-resistant, p. 1301

TEHNIKA, Beograd, Vol 10, No. 9, 1955

SO: EEAL, Vol 5, No. 7, July 1956

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      Technicians of Yugoslavia. Gradevinar 14 no.8:304 Ag '62.

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Comparative studies on the seasonal dynamics of some soil
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1/3:233-238 Ja-D '63.

1. Institute of Pedology and Soil Technology of the
Agricultural Faculty, Zagreb.

Marusic, Rikard

Bauxite ore reserves in Bosanska Krupa, Yugoslavia. Rikard Marušić (Tehnički Fak., Zagreb, Yugoslavia). Rudarsko-Met. Zbornik 1952, 21-35.—Bauxite deposits in the district of Bosanska Krupa are of 3 classes: widely scattered pockets and interlayered or "contact" deposits. The latter, estd. at 1,125,000 tons, are the only ones of economic importance. The compn. is Al_2O_3 60-70, SiO_2 2.6-11.5, Fe_2O_3 9-23, TiO_2 2.20-3.20, and loss on ignition 13-15%. The deposits extend for 10 miles on the line Pritoka-Risova Greda, averaging 3 ft. in width and 90 ft. in depth. They are conveniently situated with regard to ports Split and Sibenik and to the future center of Yugoslav Al industry in Strnišče.   S. Barabas

Marisic, Rikard

Imotski bauxite district. Rikard Marusic (Tehnicki Fak., Zagreb, Yugoslavia), _____ 1954. 63-70.—This describes an area of 300 sq. km. on the border lines between Bosnia, Herzegovina, and Dalmatia, north of Imotski, and is a continuation of Mostar Bauxite District. The estd. bauxite reserves are of 3,000,000 tons. The Imotski district can be divided into 5 geographic groups: Strazbenica, Zagorje, Galici, Dalmatian group, and smaller Bosnian deposits. Zagorje is the most important group with estd. 750,000 tons of bauxite contg. an av. of 54% Al_2O_3 and less than 1% SiO_2; Galici has 500,000 tons of compn. Al_2O_3 52.5-57, SiO_2 1.5-8, Fe_2O_3 19-23.5, TiO_2 2.5-3 and LOI (loss on ignition) 17.5-20%; Strazbenica has 250,000 tons of low-grade trihydrated bauxite contg. 48.5-50% Al_2O_3 but mostly less than 1% SiO_2; Bosnian and Dalmatian groups each contain 250,000 tons of bauxite ore of compn. Al_2O_3 49.5-64, SiO_2 0.5-9.5, Fe_2O_3 19-26, TiO_2 2.5-4.5, and LOI 11.5-20.5, spread over an extensive area in small pockets.

MATULIC, R.

MATULIC, R. Tr...... with coal and its separation in industrialized countries;
        impressions from the 2d International Congres on the Separation of
        coal in Essen. p. 38.

Vol. 7, no. 3, 1958
TEHNICKI PREGLED.
TECHNOLOGY
Yugoslavia

So: East European Accessions, Vol. 9, May 1960

MARUSIC, R.

Synthetic studies in the chloramphenicol series. III. Synthesis of threo-DL-chloramphenicol from DL-serine ethyl ether. D. Fleš, B. Balenović, R. Marušić, and N. Manger ("Pliva," Zagreb, Yugoslavia). Arhiv Kem. 27, 1-8(1955) (in English); cf. C.A. 50, 8645.—A mixt. of 2.2 g. o-C$_6$H$_4$(CO)$_2$NCH(CH$_2$OEt)Bz (I), 4.15 g. (iso-PrO)$_3$Al and 40 ml. iso-PrOH was heated 7 hrs. in an oil bath under partial reflux, iso-PrOH removed in vacuo, 20 ml. C$_6$H$_6$ and a soln. of 30 g. tartaric acid in 50 ml. H$_2$O added to the residue, the aq. layer sepd. and extd. with three 10-ml. portions of C$_6$H$_6$, the exts. dried and evapd. to leave 2.2 g. crude o-C$_6$H$_4$(CO)$_2$NCH(CH$_2$OEt)CH(OH)Ph (II) (all compds. reported are of DL-threo series); crystd. from 8 ml. EtOH 1.45 g., m. 153-5°; analytical sample m. 156-7° (from EtOH). An analogous prepn. from crude I gave II in 17.2% yield [calcd. on o-C$_6$H$_4$(CO)$_2$NCH(CH$_2$OEt)COCl]. A mixt. of 10 g. II, 10 ml. C$_5$H$_5$N and 30 ml. Ac$_2$O let stand overnight, poured on 240 g. ice, extd. with EtOAc, the exts. washed with three 10-ml. portions of 25% H$_2$SO$_4$, then with NaHCO$_3$ soln., dried and evapd. gave 12.2 g. of an oil, which, dissolved in 30 ml. EtOH and kept overnight in an icebox, yielded 10 g. o-C$_6$H$_4$(CO)$_2$NCH(CH$_2$OEt)CH(OAc)Ph (III), m. 90-1°, b. 200-10°. A mixt. of 2.5 g. III, 35 ml. abs. EtOH, and 0.85 ml. 80% N$_2$H$_4$.H$_2$O soln. was refluxed 1 hr., evapd. in vacuo, the residue heated 10 min. with 25 ml. N HCl at 50°, let stand 30 min., the theoretical amt. of phthaloylhydrazide

(IV) filtered off, the filtrate refluxed 1.5 hrs., cooled with ice, alkalinized with 20% NaOH soln., extd. with eight 20-ml. portions of EtOAc, and the extract dried and evapd. in vacuo to leave 1.32 g. PhCH(OH)CH(NH$_2$)CH$_2$OEt (V), b. 110-20°. To 18 ml. of fuming HNO$_3$ 4.6 g. III was added during 15 min. at -20°, the mixt. kept 35 min. at room temp., quenched on 150 g. of ice, neutralized with NaHCO$_3$, extd. with EtOAc, and the ext. washed with H$_2$O, dried, and evapd. in vacuo to leave 5.12 g. of a semicryst. product, which crystd. from 50 ml. EtOH yielded 3.9 g. o-C$_6$H$_4$(CO)$_2$NCH(CH$_2$OEt)CH(OAc)C$_6$H$_4$NO$_2$-p (VI), m. 110-20°; analytical sample m. 129-31° (softens at 110°) (from EtOH, then Me$_2$CO-petr. ether). III (5 g.) refluxed 2 hrs. with 14.5 ml. N N$_2$H$_4$.H$_2$O soln. in abs. EtOH, cooled, IV filtered off and washed with 10 ml. CH$_2$Cl$_2$, the filtrate evapd. in vacuo, the residue dissolved in 20 ml. CH$_2$Cl$_2$, kept 2 hrs. in ice to sep. addnl. IV (total yield 92%), and the CH$_2$Cl$_2$ soln. evapd. in vacuo to leave 3.55 g. of an oil which was dissolved in 2.4 ml. C$_5$H$_5$N, 2.4 ml. Ac$_2$O added, let stand overnight, poured on 30 g. ice, extd. with five 5-ml. portions of EtOAc, and the exts. washed with 10% H$_2$SO$_4$ and NaHCO$_3$ soln., and evapd. in vacuo to give 4.3 g. of an oil; crystd. from 15 ml. Et$_2$O it gave 3 g. PhCH(OAc)CH(NHAc)CH$_2$OEt (VII), m. 87-9° (sublimed at 100-10°/0.04 mm.). VII (1.3 g.) added to 4.5 ml. fuming HNO$_3$ during 20 min. at -20° to -15°, let stand 30 min., poured on ice, neutralized with NaHCO$_3$,

(3)

(OVER)

extd. with EtOAc, and the ext. dried and evapd. in vacuo gave 1.4 g. of a yellow oil (VIII), which was heated 2.5 hrs. with 12 ml. 5% HCl on a steam bath, evapd. in vacuo, the residue dissolved in 4 ml. 48% HBr, evapd. in vacuo and the residue crystd. from EtOH-Et₂O to give 0.32 g. p-O₂NC₆H₄CH(OH)CH(NH₂·HBr)CH₂OEt (IX), m. 193-4.5°. IX was prepd. also in 0.4-g. yield by refluxing 2 g. crude VI with 5.2 ml. N N₂H₄·H₂O soln. in abs. EtOH during 1.5 hrs., dilg. with 6 ml. abs. EtOH, cooling, sepg. IV as above, evapg. the filtrate, refluxing the residue with 30 ml. 5% HCl 2.5 hrs., cooling, extg. with Et₂O, evapg. in vacuo, treating the residue with 4 ml. 48% HBr, allowing to stand for 2 days and crystg. from EtOH-Et₂O. VIII gave after heating with 5% HCl, alkalinization, extn. with EtOAc and evapn. p-O₂NC₆H₄CH(OH)CH(NH₂)CH₂OEt, b. 110-50°. A mixt. of 13.5 ml. 48% HBr and 1.5 g. IX was heated 30 min. at 130° and 1 hr. at 120° in a sealed tube, evapd. in vacuo, the residue dissolved in 8 ml. H₂O, alkalinized with concd. NH₄OH, extd. with 100 ml. EtOAc, the ext. dried and evapd. in vacuo, and the residue (0.024 g.) crystd. from 10 ml. H₂O to give 0.72 g. p-O₂NC₆H₄CH(OH)CH(NH₂)CH₂OH, m. 140-1°, which refluxed with excess Cl₂CHCO₂Me gave m. threo-chloramphenicol, m. 150-1°.   E. Gustuk

MARUSIC, RIKARD

The bauxite deposits of Montenegro, Rikard Marusic. *Berg-u. hüttenmänn. Monatsh. montan. Hochschule Leoben.* 102/169-80(1957).—The geographical, geol., and mineralog- ical conditions are described. The chem. compn. is: Al_2O_3 54-65, SiO_2 0.5-8.5, Fe_2O_3 18-31, TiO_2 2.6-4.9, loss on heating 11-14%, depending on the geographical location of the deposit. Besides these, so-called "white" (Fe-poor) bauxites are found with Al_2O_3 55 and less, SiO_2 10-22, Fe_2O_3 1-10%; these are used for *refractory materials* and *prepn. of Lafarge cement.* 18 references. M. Hartenheim

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A critical review of the activities of the international Mineral
Dressing Congress in Stockholm. p. 317.

RUDARSKO-METALURSKI ZBORNIK. (Ljubljana. Univerza. Fakulteta za
rudarstvo, metalurgijo in kemijsko tehnologijo. Oddelek za rudarstvo
in metalurgijo) Ljubljana, Yugoslavia, No. 3, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 6,
June 1959.

Uncl.

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A route for the preparation of L-hygrinic acid. Croat chem acta
3. no.4:157-158 '59.   (EEAI 9:9)

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Zabreb, Croatia, Yugoslavia.
        (Hygric acid)

GASPERT, B.; STEFANAC, Zlata; MARUSIC, R.; BALENOVIC, Kresimir

Optically active trisulphides and tetrasulfides related to L cystine.
Croat chem acta 32 no.2:85-90 '60.   (EEAI 10:4)

1. Chemical Laboratory, Faculty of Science, University of Zagreb,
Strossmayerov trg 14, Zagreb, Croatia, Yugoslavia. 2. Redakcioni
odbor (Committee of Publication), Croatica Chemica Acta, member of the
Committee (for Stefanac and Balenovic)
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PROTOPOPOV, V.V.; POLIKARPOV, N.P., otv. red.; KARPICH, V.K..,
        red.

        [Bioclimate of the dark green mountain forests of southern
        Siberia] Bioklimat temnokhvoinykh gornykh lesov IUzhnoi
        Sibiri. Moskva, Nauka, 1965. 94 p.   (MIRA 18:2)

MARUSKA, A.

Full use of caloric value of coke in a stationary drying plant. p. 107.

TECHNIKA VYKUP", MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho prumyslu a vykupu zemedlskych vurobku a Sdruzeni mlynu a pekaren, Praha, Czechoslovakia, Vol. 5, no. 3, Mar. 1959.

Monthly List of East European Accessions (EEAI), LC Vol. 9, no. 2, Feb. 1960.

Uncl.

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    Technologia pre 1. roc. hosp. skol. dvojroc. (Technology for the 1st grade
of two-year economic scholls. a textbook. Tr. from the Czech. illus., tables)
Bratislava, SPN, 1957. 202 p.

Bibliograficky katalog, CSR, Slovenske khihy, Vol. VIII. 1957. No. 10. p. 312

MARUSKA, Milos

     Czechoslovak bakery machines operating in United States bakeries.
     Prum potravin 14 no.7:364-365 Jl '63.

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     Topos, Sluknov.

JERABEK, Radoslav, inz.; MARUSKOVA, Libuse

Better preparation of surfaces reducing the consumption of
coating materials. Drevo   18 no.1:17-20 Ja '63.

1. Vyvoj nabytkarskeho prumyslu, Brno.

JERABEK, Radoslav, inz.; MARUSKOVA, Libuse

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Drevo 18 no.4:151-152 Ap '63.

1. Vyvoj nabytkarskeho prumyslu, Brno.

L 24294-66   EWT(1)/EWT(m)/EWP(t)   IJP(c)   JD/WW/GG

ACC NR: AP6006994   SOURCE CODE: UR/0051/66/020/002/0209/0213

AUTHORS: Bogdanova, I. P.; Marusin, V. D.

ORG: none

TITLE: Study of the secondary processes occurring in electronic
excitation by the coincidence-count method

SOURCE: Optika i spektroskopiya, v. 20, no. 2, 1966, 209-213

TOPIC TAGS: excited electron state, helium, spectral line, light
excitation, electron recombination

ABSTRACT: This is a continuation of earlier work (Opt. i spektr.
v. 17, 151, 1964) devoted to light excitation and deals with the
secondary maximum near the excitation threshold of several helium
lines observed in the dependence of the excitation functions of the
spectral lines on the addition of impurities (mercury, krypton, and
zenon) and resulting from secondary nonlinear processes occurring
during excitation. The secondary processes were separated and identi-
fied by means of apparatus (Fig. 1) based on a previously proposed

Card   1/3   UDC: 539.186.2
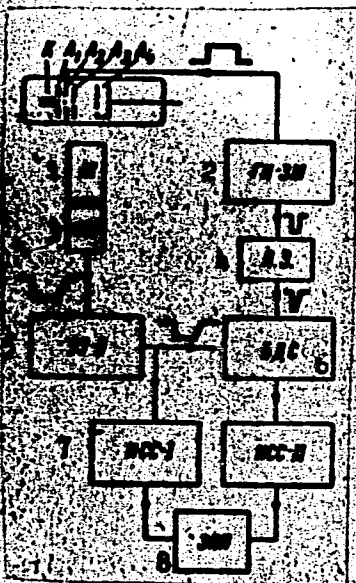
L 24294-66

ACC NR: AP6006994

Fig. 1. Diagram of installation.
1 -- Monochromator, 2 -- pulse generator,
3 -- photomultiplier, 4 -- delay line, 5 --
amplifier, 6 -- coincidence circuit, 7 --
counting rate meter, 8 -- automatic recorder.

idea (DAN SSSR v. 156, 58, 1964) of separating in time the direct excitation due to electron impact from the population due to the secondary processes, and counting the coincidences between the two separate channels. No secondary processes were observed in pure helium, but in a mixture of He + 10% Kr, at a total mixture pressure 4×10^{-2} mm Hg, emission of the spectral lines of helium occurred at electron velocities lower than the threshold in pure

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L 24294-66

ACC NR: AP6006994

helium by not less than 2 ev. The time delay of the secondary
process causing the emission of the 4713 $\overset{o}{A}$ helium line below the ex-
citation threshold was investigated in detail. The results fit the
hypothesis advanced in the earlier paper that the emission occurring
below the excitation threshold is due to recombination of molecular
ions of helium with slow electrons. The role of the impurity,
however, still remains unclear. The authors thank S. E. Frish for
interest in the work and discussion of the results, and G. K.
Kartsev for help in the assembly and adjustment of the apparatus.
Orig. art. has: 6 figures

SUB CODE: 20/ SUBM DATE: 15Jul64/ ORIG REF: 002/ OTH REF: 002

Card N 3/3

CHERDANTSEV, G.N.; BASHLAVINA, G.N.; MARUSOV, A.Ya.; MERKULOV, V.A.; FILIPPOV,
    Yu.V.; LARIN, D.A.; DENZIN, P.V.; KOMKOV, A.M.; KARAVAYEVA, Z.F.; MIROSH-
    NICHENKO, A.F.; KOLDAYEV, P.K.; SKVORTSOV, P.A.; PAVLOV, V.V.

Discussion of K.A.Salishchev's report. Brief report of speeches of G.N.
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D.A.Larin, P.V.Denzin, A.M.Komkov, Z.F.Karavaeva, A.F.Miroshnichenko,
P.K.Koldaev, P.A.Skvortsov, V.V.Pavlov. Vop.geog. no.34:14-34 '54.
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making of maps. Vop.geog. no.34:73-83 '54.   (MLRA 7:12)
      (Cartography)

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[World atlas] Atlas mira. Moskva, Voen.izd-vo M-va obor. SSSR, 1958. 459 p.   (MIRA 11:5)

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MARUSOVA, I.V.; KHOLINA, N.M.

Biology of the flycatcher Muscicapa albicollis Temm in western
provinces of the Ukraine. Nauk. zap. UzhGU 40:75-81 '59.
(MIRA 14:4)

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(Ukraine—Flycatchers)

MARUSOVA, T.P., kand. tekhn. nauk; SHIPUNOV, N.V., kanc tekhn. nauk;
     PETRI, L.O., inzh.

     Investigating the conditions for electrical safety in salt
     mines. Gor. zhur. no.11:69-70 N '64.   (MIRA 18:2)

     1. Moskovskiy energeticheskiy institut.

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Basic norms for emergency lighting. Trudy MEI no.28:254-267 '56.
(Lighting)   (MLRA 10:6)

MARTYNOVA, T... , Can... been xi -- ... ti ... "preparatory ...

of industrial enterpr... es." ... , lya... , ... or ... of ... ...

education. ... ... rder of teris... w... Engineer... ... ...

(#L, ..., ...)

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USSR/Soil Science - Genesis and Geography of Soils.   J.

Abs Jour   : Ref Zhur - Biol., No 15, 1958, 67869

Author   : Marusova, V.Ya.
Inst   : -
Title   : An Experiment in Constructing a Scale of Conventional
               Hatchure Marks for Soil Maps of the USSR.

Orig Pub   : Pochvovedeniye, 1957, No 8, 12-18.

Abstract   : The scale proposed for use in drawing soil maps of various
               scales was drawn up on the basis of the conventional sym-
               bols for the state soil map of the USSR, scale 1:1,000,000.
               A particular hatchure mark was chosen for each soil type.
               The soil sub-types within the types are made to stand out
               by using variations of the hatchures. The soil zones are
               indicated by the intensity of the general tone of the hat-
               chures. Genetic soil types which differ greatly from one
               another in their properties are distinguished by sharply
               contrasting portrayal in the hatchures. The scale enables

Card 1/2

- 3 -

MARUSSI, Antonio

Gravitational anomalies and tectonics in Central Asia. Geofiz
kozl 9 no.1/2:37-39 '60.

MARUSSI, A.

Present state of geodesy. Geod. i kart. no.3:61-69 Mr '63.

(MIRA 16:7)

(Geodesy)

TEODORESCU, I., prof. (Galati); MARUSTERU, St., prof. (Baia Mare)

Mathematical notes. Gaz mat B 14 no.3:151-155 Mr '63.

MARUSTERU, St. (Baia Mare)

One of the D Pompeiu theorems. Gaz mat B 14 no.11:661-662 N'63.

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Similarity of polygons. Gaz mat fiz 70 no.3:106-108 Mr '65.

MARUSYAK, V...

Applicability of the Born approximation in the case of electron scattering by ionized admixtures. Ukr. fiz. zhur. 9 no.11:1277-1278 N '64.   (MIRA 17:9)

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USSR/Human and Animal Physiology - Nervous System.   R-12

Abs Jour   : Referat Zhur - Biologiya, No 16, 1957, 71191

Author   : Marusyeva, A.M.
Title   : Sensitivity Changes of Man's Sound Analyser in the
              Process of Working up Differentiation.

Orig Pub   : Tr. In-ta fiziol. AN SSSR, 1956, 5, 358-367

Abstract   : A tone of 1000 gc cycle was reinforced by a pain stimula-
              tion of the skin of the hand, -tone of 300 gc was diffe-
              rentiating. Liminal intensity of sound signals was de-
              termined by a simultaneous registration of four reactions
              of the subject: verbal report, withdrawal of the finger
              from the electrode, movement of eyes to the source of
              sound, and dermal-galvanic responses. In the first series
              of tests, until the workout of complete differentiation,
              the subjects did not report verbally on the sound stimuli.
              The sensitivity to the reinforced sound stimulus under
              these conditions remained in the course of the tests on a

Card 1/2   - 135 -

USSR/Human and Animal Physiology - Nervous System.   R-12

Abs Jour   : Referat Zhur - Biologiya, No 16, 1957, 71191

high level and did not change; the sensitivity limin to the reinforced tone rose to 34 db. The reactions to differentiated sound arose only with a considerable increase in its intensity and had a 2-3 times longer latent period, then the reactions towards a positive signal. The author explains it by the change in the functional state of cortical parts of the analyser in production of differentiation. After introduction of the verbal report about the sound stimuli, sensitivity towards a differentiating tone was established, and the latent period returned to normal. When the verbal report took place from the very beginning of the test (second series of tests) the dermo-galvanic differentiation was not established at all. Consequently, the sensitivity limens are uneven in magnitude and fluctuate in accordance with the change in signal meaning of the received stimuli.

Card 2/2   - 136 -

BURESOVA, O.; MARUSYEVA, A. M.; BURES, J.; FIFKOVA, E.

The influence of cortical spreading depression on unit acti-
vity in the colliculus inferior of the rat. Physiol. Bohemo-
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processes. Chemia stosow 6 no.1:99-106 '62.

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Zakladu Fizykochemii Zjawisk Powierzchniowych, Lublin, i Zespo-
lowa Katedra Chemii Fizycznej i Technologii Chemicznej, Uniwer-
sytet im. Marii Curie-Sklodowskiej, Lublin.

MARUSZCZAK, H.

Meteorological Abst.
Vol. 4 No. 5
May 1953
Climatology and
Bioclimatology

5-206
Maruszczak, Henryk, Stan i zmiany lesistosci uojewództwa lübelskiego w latach 1830
1930. [The state and changes of the forest area in the province of Lublin in the years 1830
1930.] Lublin (Uniwersytet Marii Curie-Skłodowskiej) Rocznik Annale Sec 6 S. 5 p
178, 1950. 13 figs., 9 tables, 12 diagrs   Summary in English p. 175-178   DWB A historical
and detailed study of forest conditions in the Lublin region during 100 years is to this paper
In the introduction the effect of forests on climate, soil, temperature, humidity, precipitation
snow cover, surface and ground water, etc. and the need for reforestation and proper conservation
are outlined   The study is based mainly on detailed charts of forests in the region in
1830 and 1930. The author points out that the gradual but significant shrinkage of the forest
areas has been accompanied by a drying up of the soil, a reduction of water reservoirs (caused
by washing of denuded spaces) and a decrease of rainfall (shown in a diagram of annual
amount of precipitation observed in Pulavy in the years 1874-1948). The third part of the
paper is devoted to the problem of organizing a rational system of reforestation based on
considerations of the quality of the soil, the demand for timber and the requirements of the
water economy. Subject Headings: 1. Forest climatology 2. Forest influences 3. Lublin
Region 4. Poland.—M R., A M.P.

MARUSZCZAK, H.

"Characteristic forms of the relief of the loess areas of the Lublin upland."p.3

CZASOPISMO GEOGRAFICZNE (Polskie Towarzystwo Geograficzne) Wroclaw, Poland
Vol. 29,no. 3, 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No, 6, June 1959

Uncl.

MARUSZCZAK, Henryk, doc.dr. (Lublin, ul.Raclawicka 23, XIV, m.23)

"Informational report from the 8th Congress of Czechoslovak
Geographers in Opava.";"Reports on geomorphological research
in 1959." Reviewed by H. Maruszczak. Czasopismo geograficzne 32
no.1:92-93 '61.

1. Uniwersytet, Lublin.

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"Slovensky kras" Reviewed by H. Maruszczak. Czasopismo geograficzne 32 no.4:461-462 '61.

1. Uniwersytet, Lublin.

Maruszewska - Wieczorkowska, Elzbieta

Alkyl- and alkenylpyridines. I. Synthesis of pyridyl sulfones and piperidyl sulfones by way of addition of sulfinic acids and mercaptans to 2-vinylpyridine. Osman Achmatowicz, Elzbieta Maruszewska-Wieczorkowska, and Jan Michalski (Polytech. Inst., Łódź, Poland). *Roczniki Chem.* 29, 1029-39(1955)(English summary).—For chemotherapeutic investigations, 2-$RSO_2CH_2CH_2C_5H_4N$ (I) were prepd. in the following ways: (A) To 0.05 mole 2-vinylpyridine (II) in 10 ml. alc. was added 0.06 mole of the sulfinic acid (III); the I pptd. after several min. (B) (For aliphatic III) an acidic (HCl or AcOH) soln. of the Na or Mg salt of III was extd. with Et_2O, the Et_2O distd., and the crude III dissolved in C_6H_6; to this soln. (contg. 0.1 mole III), was added 0.05 mole II and the C_6H_6 was distd. (C) To 0.25 mole RSH in 50 ml. C_6H_6 was added 0.3 mole II, the mixt. refluxed 5 hrs., and the sulfide (IV) distd. *in vacuo* and taken up in 50% AcOH and oxidized with $KMnO_4$ or in glacial AcOH and oxidized with 25% H_2O_2 (about 100% excess). Addn. of salts of III in presence of NaH_2PO_4 and reaction of 2-picoline with CH_2O and RSH gave poor yields. The following I were prepd. [R, m.p., recrystn. solvent, % yield, and the method (acid used in B and oxidant in C given parenthetically) reported]: Et, 62-3°, cyclohexane, 74, B (AcOH), 90, B (HCl) [HCl salt (V), m. 128-9° (from AcOEt)]; $PhCH_2$, 114°, xylene, 93, A, 94, C ($KMnO_4$), 91, C (H_2O_2) [V, m, 184-6° (decompn.) (from C_6H_6-alc.); p-McC_6H_4, 61.5°, ligroine; 86, A, [V, m. 182-3° (decompn.) (from MeOH)]; p-$AcNHC_6H_4$ (VI), 171-2°, alc.-H_2O, 97.

Achmatowicz, Osman

A; p-H$_2$NC$_6$H$_4$, 114°, C$_6$H$_6$, 98 by hydrolysis (HCl) of VI gave II and salts of III. I (or their V) reduced over PtO$_2$ gave the following piperidine sulfones, 2-RSO$_2$CH$_2$CH$_2$- C$_5$H$_9$N· (R; m.p.; recryst solvent; and % yield given): Et, 37-8°, n-hexane, 95 [V, m. 205-6° (decompn.) (from MeOH-C$_6$H$_6$)]; PhCH$_2$, 85°, ligroine, 77 [V, m. 241-6° (decompn.) (from iso-PrOH); HOAc salt, m. 125-6° (from cyclohexane)]; Ph, —, —, 72 [V, m. 205-6° (decompn.) (from Me$_2$CO), 72% yield]; p-MeC$_6$H$_4$, 54-5°, ligroine, 92 [V, m. 206-7° (decompn.) (from MeOH-C$_6$H$_6$); N-Bz deriv., m. 143-4° (from ligroine-C$_6$H$_6$)]; p-AcNHC$_6$H$_4$, —, — [HOAc salt, m. 190-1° (from Me$_2$CO), 75% yield]; p-H$_2$NC$_6$H$_4$, 159°, toluene, 98. 2-[2-(Phenylmercapto)-ethyl]pyridine b$_3$ 197-8°, b$_1$ 64°, n_D^{25} 1.6068, d$_4$ 1.1169, 96% yield; picrate, m. 119° (decompn.) (from alc.)

A. Sementsov

MARUSZEWSKA-WIECZORKOWSKA, E.

Alkyl- and alkenylpyridines. III. Pyridine sulfones and some simple sulfur derivatives with 2-pyridylmethyl residue. Elżbieta Maruszewska-Wieczorkowska and Jan Michalski (Politechnika, Łódź, Poland). Roczniki Chem. 31, 543-51 (1957)(English summary); cf. C.A. 50, 12040h; 51, 11347e. —The following 2-C$_5$H$_4$NCH$_2$Y were prepd. from 2-pyridyl-methyl chloride (I) by classic methods (Y, % yield, m.p., and m.p. picrate given): SO$_2$Et, 97, 105°, 183-5°; SO$_2$Ph, 75-90, 113°, 214-16°; SO$_2$C$_6$H$_4$Me-p, 96, 155°, 197-8°; SO$_2$C$_6$H$_4$NHAc-p, 80, 196°, 229-30°; SO$_2$C$_6$H$_4$NH$_2$-p, 100, 199°, —; SC(:NH)NH$_2$.HCl, 95, 152°, —; SH, 63, — (b.$_{0.3}$ 57-8°, n$_D^{19}$ 1.5758, d$_{19}$ 1.1533), 163-4; SPh, 80, — (b.$_{0.1}$ 97-8°, n$_D^{19}$ 1.6758, d$_{19}$ 1.1533), 124-5°; SCN, 84, — (b.$_{0.1}$ 77-8°, n$_D^{19}$ 1.6751, d$_{19}$ 1.1954), 165-7°; CSNH$_2$, 80, 90°, 160°.   A. Kręglewski

POLAND / Organic Chemistry.   Synthetic Organic   G-2
         Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958,77747.

Author : Maruszewska-Wierzorkowska, E. and Michalski, J.
Inst   : Polish Academy of Sciences.
Title   : Synthesis of Organophosphorus Compounds Containing
          Pyridylalkyl Radicals by the Addition of Dialkyl
          Phosphites and Their Structural Analogs to 2-Vinyl-
          pyridine.

Orig Pub: Bull Acad Polon Sci, Ser Sci Chim Geol et Geograph,
          6, No 1, 19-21 (1958) (in English).

Abstract: The addition of R'R''P(X)H (R', R'' = alkyl or
          alkoxyl, X = O or S) to 2-vinylpyridine in the
          presence of C_2H_5ONa at 100° or in the absence
          of C_2H_5ONa under milder conditions gives
          $2-C_5H_4NCH_2R$ (I) (R, the yield in %, bp in °C/mm.,

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POLAND / Organic Chemistry. Synthetic Organic   G-2
Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77747.

Abstract: $n^{25}D$, d_4^{25}, and the mp in ^{o}C of the picrolonate
are given in that order): $P(O)(OC_2 H_5)_2$,
40 (60 with $C_2 H_5$ ONa), 101/0.05, 1.4938, 1.1156,
91-92; $P(O)(OC_3 H_7)_2$, 99/0.05, 1.4812, 1.0591,
134-135 (decomp); $P(O)(OC_4 H_9 -n)_2$, 43 (65 with
$C_2 H_5$ ONa), 132-0.2, 1.4841, 1.0460, --;
$P(O)(CC_2 H_5)C_6 H_5$, 59, 143-145/0.1, 1.5560, 1.1419,
picrate mp 158-159°; $P(O)(CH_2 C_6 H_5)_2$, 92, --,
mp 118°, -, -, -, picrate mp 158-160°; $P(S)(OC_2 H_5)_2$,
58, 97/0.05, 1.5101, 1.1085 (at 30°), -. The
structure of I is proved by forming the picrate

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