

SEDLAR, Ladislav, inz.

Use of perlite sand in the building industry. Tech praca 14
no.12:998-1000 D '62.

1. Slovenska vysoka skola technicka, Bratislava.

SEDLAR, M.

Brazing on spot-welding machines; also, remarks by B. Vrana. p. 114.
ZVARANIE Vol. 5, No. 4, Apr. 1956
Czechislovakia

SOURCE: EAST EUROPEAN LISTS Vol. 5, No. 7, July 1956

SEDLAR, N.

Improving the capacity of high-speed steels by heating with steam. p. 49.

STROJNISKI VESTNIK. (Fakulteta za elektrotehniko in strojninstvo Univerze v Ljubljani, Institut za turbotroje v Ljubljani, Drustvo strojnih inženirjev in tehnikov LR Slovenije in Strojna industrija Slovenije.) Ljubljana, Yugoslavia. Vol. 5, no. 2, Mar. 1959.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, no. 8, Aug. 1959.

Uncl.

SEDLAR, V.

b

12

13922: Use of Complexones in Chemical Analysis. (In English.) Part XII. Determination of Tungsten by Means of 8-Hydroxyquinoline. R. Prbil and V. Sedlar. Part XIII. Potentiometric Determination of Certain Cations by Means of "Complexone III" Solution. R. Prbil, Z. Koudela, and B. Matyska. Part XIV. Review of Some New Methods of Separation and Estimation. R. Prbil. *Collection of Czechoslovak Chemical Communications*, v. 16, Feb. 1, 1951, p. 69-91.

Part XII deals with the determination of tungsten as the oxinate and its separation from other elements. Part XIII describes direct potentiometric titration of ferric iron and an indirect titration of Al, Cd, Pb, Zn, Cu, and Bi. A procedure is given for the complexometric estimation of Fe and Al in the presence of each other. Part XIV describes reactions with some common compounds. Advantages of complexing reagents in quantitative analysis are demonstrated. 20 ref.

ASB:SLA METALLURGICAL LITERATURE CLASSIFICATION

UHLIR, Jaremir; UHLIR, Miloslav; SEDLARIK, Karel; MRUZEK, Maxmilian;
DOLINA, Jiri; RICHTER, Josef

Replacement of a part of the wall of the urinary bladder with terylene
tissue prosthesis. Sar. med. fac. med. Brunen. 35 no.4:161-164 '62

I. II. chir. klinika v Brne, prednosta prof. dr. Jan Mavratil II.
gynecolog. klinika v Brne, prednosta doc. dr. Uher.
(BLADDER surgery) (PLASTICS)

COUNTRY : CZECHOSLOVAKIA H
CATEGORY : Chemical Technology. Chemical Products and
Their Applications. Water Treatment. Sewage.
ABS. JOUR. : RZKhim., No. 23 1959, No. 82662
AUTHOR : Prokonek, K.; Sedlarik, L.; Hos, F.
INSTR. : -
TITLE : Sanitary-Hygienic Evaluation of Drinking Water
Used in the Rural Sections of the Gotwald
Oblast.
ORIG. PUB. : Sb. Ceskosl. akad. zemed. ved. veterin. med.,
1959, 4, No 2, 105-114
ABSTRACT : No abstract.

CARD:

1/1

DITTERTOVA, V.; BURAN, L.; BABULOVA, A.; SELECKY, F.V.; technicka spolupraca
SEDLAROVA, B.; NEMECEK, V.

Effect of oxyphylline on the cardiotoxic activity of convallatoxin
and helveticoside and on their action on the heart-lung preparation
of the cat. Cesk. farm. 12 no.2:104-107 F '62.

1. CSAV, Chemicky ustav SAV, oddelenie farmakodynamiky, Bratislava.
(HEART) (LUNG) (THEOPHYLLINE) (CARDIAC GLYCOSIDES)
(CONVALLARIA)

L 14894-66

ACC NR: AP6008342

SOURCE CODE: CZ/0049/65/000/003/0181/0184

AUTHOR: Mitterhauszerova, Ludmila--Mittergauszerova, L. (Engineer; Bratislava);
Ginterova, Anastazia (Graduate biochemist, Candidate of science; Bratislava);
Sedlarova, Ludmila (Doctor, Candidate of science; Bratislava)

ORG: Research Institute of the Alcohol and Food Preserving Industry, Bratislava
(Vyskumny ustav liehovarsko-konzervarenskeho priemyslu)

TITLE: Influence of selection upon the agglutination of baker's yeast

SOURCE: Biologia, no. 3, 1965, 181-184

TOPIC TAGS: yeast, heredity, food technology

ABSTRACT: The heredity of the property of agglutination of baker's yeast was verified by making fourfold selection in commercial yeast and investigating the products. When the selection was made, so that an increased tendency to agglutination would be maintained, the occurrence of agglutinating isolates was increased from 10.4% to 42.9%, and the non-agglutinating isolates fell from 48.7% to 19.5%. In selection favoring non-agglutinated isolates their content increased from 48.7% to 55.4%, and the content of the agglutinated isolates decreased from 10.4 to 3.1%. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 06 / SUEM DATE: 04Nov64 / ORIG. REF: 001 / OTH REF: 005
Card 1/1 *mp*

14
B

L 14895-66

ACC NR: AP6008350

SOURCE CODE: CZ/0049/65/000/004/0287/0293

AUTHOR: Sedlarova, Ludmila (Doctor; Bratislava)

ORG: Research Institute of Distilleries and Food Canning, Bratislava
(Vyskumny ustav liehovarskeho a konzervarenskeho priemyslu)

TITLE: Possibilities and importance of the control of species purity of yeast
by genetic analysis

SOURCE: Biologia, no. 4, 1965, 287-293

TOPIC TAGS: yeast, fermentation, carbohydrate, genetics

ABSTRACT: Morphological
character of the cells and of giant colonies, sporulation ability,
assimilation and fermentation of fructose, galactose, maltose,
and sucrose, and of raffinose were studied. Cultures form Sac-
charomyces oviformis Osterwalder from the collection of the Chem-
ical Institute of the Slovak Academy of Sciences at Bratislava
were used. It was found that two monocultures from different asci
partially fermented galactose, which may indicate a long term
adaptation; practically all spore monocultures showed sporulation
ability. Giant colonies showed identical spore monocultures, which
could indicate the probable diploid character of these cultures.

Card 1/2

L 14895-66

ACC NR: AP6008350

E. Bocava, A. Friedlova, M. Kubinecova, and H. Vlckova participated in the technical work. Orig. art. has: 2 figures and 2 tables. [JFRS]

SUB CODE: 06 / SUBM DATE: 04Nov64 / ORIG REF: 002 / OTH REF: 008

Card 2/2 *mjp*

MITTERHAUSZEROVA, Ludmila; GINTEROVA, Anastasia; SEDLAROVA, Ludmila

The effect of selection on the agglutination of baker's yeast.
Biologia (Bratisl) 20 no.3:181-184 '65

1. Vyskumny ustav liehovarsko-konzervarenskeho priemyslu v Bratislave.

SEDLAROVA, Ludmila

Possibilities and significance of generic purity of yeasts by means of genetic analysis. Biologia (Bratisl) 20 no.4:287-293 '65.

1. Vyskumny ustav liehovarskeho a konzervarenskeho priemyslu v Bratislave.

RAPONSKI, B.; ATANASOVA, R.kh.; ALTUNKOVA, M.; SEDLARSKI, D.

Difficulties in the differential diagnosis of acute surgical abdomen
in children. Khirurgiia, Sofia 13 no.7/8:638-648 '60.

I. Institut za burza meditsinska pomosht "N.I.Pirogov," Sofia.
Gl.lekar: Khr. Zdravkov.
(ABDOMEN ACUTE in inf & child)

SEDLECKY, O. ; Svoboda, K.

Securing an earthwork cutting. p. 242.

INZENYRSKE STAVBY. (Ministerstvo stavebnictvi) Praha, Czechoslovakia.
Vol. 7, no. 7, July 1959

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 11, Nov. 1959
Uncl.

SEDLICKY, Otakar, inz.; PROCHAZKA, Antonin

Problems and prospects of mining and processing noble stones.
Geol průzkum 6 no. 7:195-197 Ji '64.

1. Research Institute of Building Construction, Prague.

KVASNIKOV, A.V., professor; SEDL'NIK, G.I.; LARIONOV, G.Ye., tekhnicheskiy redaktor.

[Working cycles and energy balances in aircraft engines] Protssesy i balansy v aviamotornykh ustanovkakh. Moskva, Oborongiz, Glav. redakttsia aviatsionnoi lit-ry, 1948. 256 p. [Microfilm] (MLRA 7:11)
(Airplanes--Engines)

BAGIROV, G.; SEDEL'NIKOV, G.S.; RZAZADE, P.F.

APPROVED FOR RELEASE: 08/23/2000

Solubility of $MgCl_2$ in H_2O and $Mg(OH)_2$ in H_2O and $MgCl_2$ - H_3BO_3 - H_2O at 25° . Azerb.khim.zhur. no.4:105-109, 1964.
(MIRA 18:12)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR. Submitted May 23, 1964.

SOV-109-3-6-16/27

AUTHOR: Sedletskaya, N. S.

TITLE: Phase of the Reflection Coefficient in a Short-Circuited Waveguide with Ferrite (Faza koeffitsiyenta otrazheniya v zakorochennom volnovode s ferritom)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 6, pp 829-831 (USSR)

ABSTRACT: Ferrites, when magnetised, can be employed to change the resonant frequency of the cavity resonators in the centimetre waveband. The magnitude of the frequency change or the detuning can be estimated by determining the phase of the reflection coefficient in a short circuited waveguide provided with a volume of ferrite. In the work described, the change of the phase of the reflection coefficient was determined from the displacement of the minimum of the standing wave in a measuring line which was loaded with a rectangular waveguide section containing the ferrite and the shorting plunger. The losses were estimated from the standing wave ratio. The measurements were carried out at a wavelength of 9.24 cm and the magnetic samples were either aluminium-magnesium ferrites or ferrite-dielectric plates. The ferrite samples were in the form of a bar having dimensions 68 x 9.5 x 2.5 mm. The results of the measure-

Card 1/3

SOV-109-3-6-16/27

Phase of the Reflection Coefficient in a Short-Circuited Waveguide with Ferrite

ments are shown in Figs.1, 2 and 3. Fig.1 shows the phase change as a function of a distance d for both ferrite samples at a magnetising field of 680 Oe. Fig.2 shows the phase (the upper graph) and the standing wave ratio (the lower graph) as a function of the magnetising field for various positions of the sample with respect to the shorting plunger; the ferrite sample in this case was a compound dielectric-ferrite plate. Fig.3 shows the phase change as a function of the distance l of the ferrite plate from the plunger for a magnetising field of 680 Oe. The author expresses her gratitude to Assistant Professor A. I. Pil'shchikov for directing this work and for valuable

Card 2/3

SOV-109-3-6-16/27

Phase of the Reflection Coefficient in a Short-Circuited Waveguide
with Ferrite

remarks in interpreting the results. There are 3 figures
and 4 references, 2 of which are English and 2 Soviet.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo
universiteta im. M. V. Lomonosova (Department of Physics of the
Moscow State University im. M. V. Lomonosov)

SUBMITTED: February 23, 1957

1. Waveguides - Properties
2. Waveguides - Performance

Card 3/3

ACC NR: AF6036958

ful to I. I. Sil'vestrovich and V. A. Krasnova for supplying the samples and also to O. K. Besedina and I. B. Krynetskaya for participating in the measurements. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 11Mar66/ OTH REF: 002

Card 2/2

ACC NR: AP6021946

(A)

SOURCE CODE: UR/6188/66/000/002/0069/0076

AUTHOR: Pil'shenikov, A. I.; Sedletskaya, N. S.

ORG: Department of Radio Engineering, Moscow State University (Kafedra radioelekhniki Moskovskogo gosudarstvennogo universiteta)

TITLE: Influence of natural ferromagnetic resonance on nonlinear losses in ferrites

SOURCE: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 2, 1966, 69-76

TOPIC TAGS: ferrite, ferromagnetic resonance, waveguide loss, phase shifter, magnetic domain structure

ABSTRACT: The authors investigated the nonlinear losses in a ferrite phase shifter of the Reggia-Spencer type operating at high power level, as a function of the closeness of the operating frequency to the frequency of the natural ferromagnetic resonance. The reason for the investigation was the complicated behavior of this phase shifter, due to the fact that some of its parts are under the influence of high frequency fields of unequal intensity or orientation, and that it operates usually in weak constant magnetic fields, when the domain structure plays an important role. The tests were made at 10 cm wavelength, using a pulsed magnetron as the generator. The pulse duration was 1 μ sec and the repetition frequency was 10 to 3 cps to eliminate the influence of thermal effects. The loss defined as the difference between the in-

Card 1/2

UDC: 621.372.852.22.01

ACC NR: AP6021946

cident and transmitted power. The ferrite rod was of rectangular cross section, and was placed in the center of a rectangular waveguide, filling it completely in height. The longitudinal magnetic field ranged from 0 to 30 Oe. The tests were made with MgCr ferrites of five different compositions. The results show that the nonlinear losses, as well as the linear properties, depend essentially on the closeness of the operating frequency to the frequency of ferromagnetic resonance in the presence of a domain structure. When the ferromagnetic resonance frequency is far from the operating frequency, the nonlinear phenomena are weak. On approaching resonance, the threshold power decreases and the nonlinear losses increase. Comparison of the results with measurements made on small spheres having different domain structures show that for compositions with small magnetization and fine grain the domain structure has no effect on the threshold, whereas in samples with large magnetization and large grain the threshold is lowered in fields smaller than saturation. The nonlinearity loss is also influenced by the increase of the magnetic permeability when resonance is approached. To determine the true mechanism of variation of nonlinear phenomena near ferromagnetic resonance in an unsaturated sample it is necessary to investigate the nonlinear phenomena in the same composition under the magnetostatic approximation conditions. The authors thank V. N. Bokov for participating with the measurements and I. I. Sil'vestrovich, and V. A. Krasnova for supplying all the samples and the list of their characteristics. Orig. art. has: 6 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 09Nov64/ ORIG REF: 001/ OTH REF: 005

Card 2/2

40941

S/109/62/007/007/009/018
D271/D308

9.2571

AUTHORS: Pil'shchikov, A. I., Dunayev, N. M. and Sedletskaya,
N. S.

TITLE: Magnetostatic oscillations of the magnetization in a
hollow cylindrical ferrite rod

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 7, 1962,
1123-1129

TEXT: The spectrum of magnetostatic modes is analyzed for a hol-
low ferrite rod with conducting planes at its ends. Resonance
starting with magnetostatic equations for the magnetization and
field strength, differential potential equations are written out,
inside and outside ferrite, and solved in Bessel functions. The
results of computations are shown in graphs, for rods having the
ratio of diameters of 0.5 and the ratio of length to outer diame-
ter of 3. Instantaneous distribution of magnetization over the
cross-section of the rod is shown for various modes; if the HF
magnetization distribution is known, the field configuration can

Card 1/2

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

117 AND 2ND EDDERS
PROCESSES AND PROPERTIES INDEX
140 AND 4TH ORDERS

ca

The proton in soils and soil degradation I. D. Sedletskif. *Khimicheskaya Sotsialist. Zemledeliya* (Moscow) 1935, No. 5, 20-27.---A theoretical discussion on the mechanism of the entrance of the H ion into the crystal lattice of the micelle, as contrasted to surface adsorption of other ions; this causes the disruption of the micellar nucleus and brings about degradation. J. S. Joffe

COMMON ELEMENTS
COMMON VARIABILITY INDEX

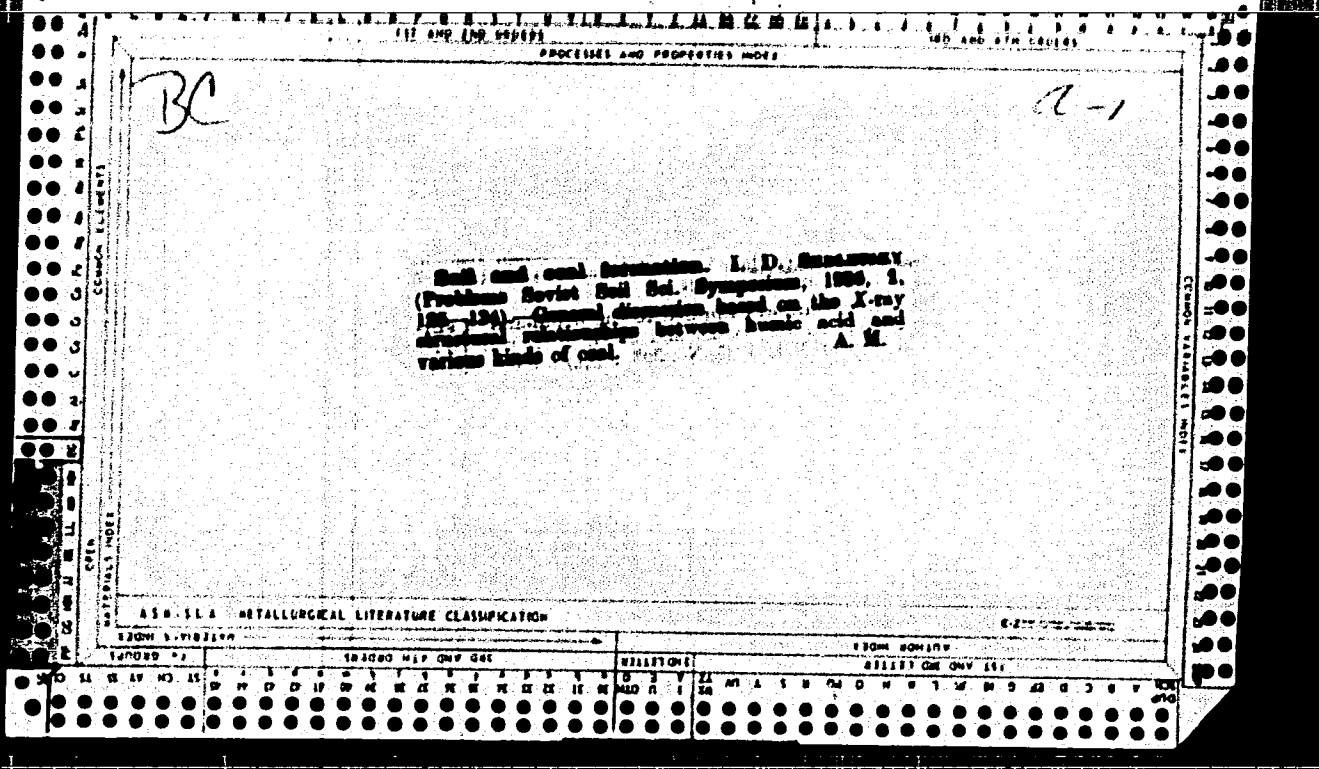
OPEN MATERIAL INDEX

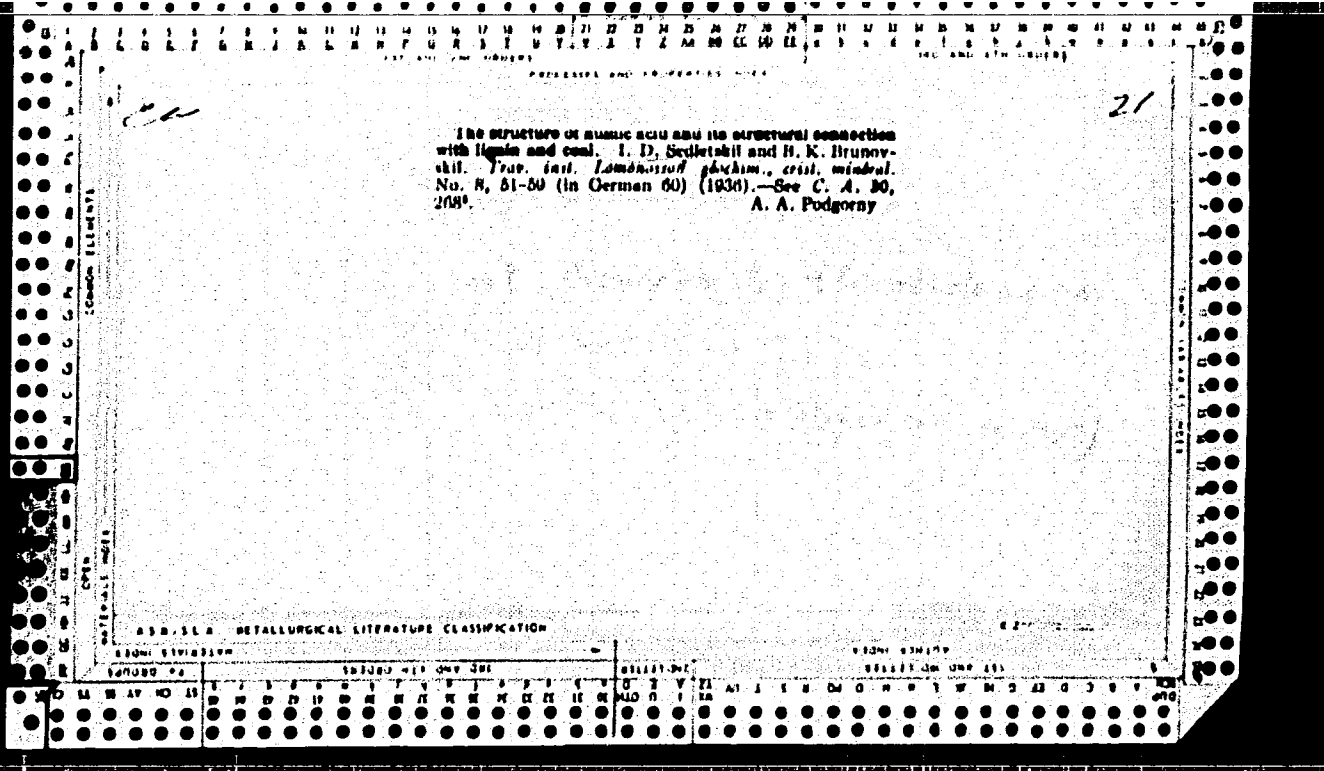
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100





15

CO

Humus as a natural body and humic acid as its natural expression. I. Sedláček. *Chemisation Socialistic Ag.* (U. S. S. R.) 1936 No. 11, 77-87.—S. reviews the work of Waksman on humus, pointing out that the "lignin-protein complexes" and the "humic acid" are one and the same. The steps in the process of humus formation are summarized as follows: (1) The complete mineralization of several compounds. (e.g.) with the formation of CO₂, H₂O, CH₄, NO₂ and mineral salts. (2) The formation of new simple compounds from the products of decomposition. (3) The transformation of some substances which are not less stable under certain thermodynamic conditions into other substances which are more stable. (4) The formation of new complex compounds: (a) synthesis of products of decomposition, (b) making the simple compounds more complex. (5) The appearance of organo-inorg. chem. and adsorption compounds. (6) The formation of org. and inorg. compounds in the living organism through the agency of the living organism. A crit. discussion of his own and of a no. of other concepts on humus is given. J. S. Joffe

ASD-564 METALLURGICAL LITERATURE CLASSIFICATION

LIST AND THE SERIALS THE AND THE SERIALS
PROCESSES AND PROPERTIES INDEX

BC *A-U*

Contents of colloidal metals in salt soils.
Schubertite, a new mineral. I. N. ASTIROV,
K. ANTONOV and I. B. STAMBOV (Comm. Acad.
Sci. U.R.S.S., 1957, 77, 281-282).—In order to
ascertain the conditions resulting in the formation
of colloidal minerals having a high alkali content,
experiments on artificial mineral production were
made. A gelatinous gel, formed by mixing pure liquid
glass dissolved in NaOH with Na₂SO₄, was dried, and
after 3 years was shown, by the Debye-Scherrer
X-ray powder method, to have developed a complex
cristalline structure. The substance is unchanged when
heated to 1000°, and is regarded as a new mineral of
high alkali content not removable by H₂O.
N. M. B.

A 69-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNONYMS		FROM ROMANIV	
GROUP "A"	GROUP "B" OR "C"	GROUP "D"	GROUP "E" OR "F"

SERIALS INDEX LIST AND THE SERIALS

Genesis of mineral from soil colloids of the montmorillonite group. I. D. Sedletskii. *Compt. rend. acad. sci. U. S. S. R.* 17, 373-7 (1937) (in German); *J. Soil, C. A.* 20, 1701^a; 30, 2400^b. Microscopic and x-ray exam. of aged amorphous Al silicate gels show that montmorillonite is formed at room temp. by spontaneous crystal. of gels having the approx. compn. of the natural mineral.

W. L. Hill

ASB, S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

15

PROCESSES AND PROPERTIES INDEX

ca

The physicochemical processes of solonchets formation. I. N. Antipov-Karatsev and I. D. Solovtsov. *Pedology (U.S.S.R.)* 22, No. 5, 888-907 (1977).—Extensive data are presented on the composition of soil profiles and of the colloid fractions. Total analyses, base-exchange capacity and type of cations, x-ray analyses of the colloid fraction, and mineral analyses of these are given. The process of solonchets formation is extensively reviewed and discussed. It is pointed out that the increase of Mg in the exchange complex is not the cause of the solonchets properties, but the result. Soils with Na in quantities less than 5% of the total absorbed bases are not solonchetic; from 5-10% Na they are weakly solonchetic; from 10-20% Na they are solonchetic soils; and from 20% and more the soils are genuine solonchets.

J. S. Jode

METALLURGICAL LITERATURE CLASSIFICATION

117 AND 118 (2018) 117 AND 118 (2018)

PROCESSING AND PROPERTY INDEX

CA

2

The formation of secondary colloidal quartz. I. D. Shadrinski. *Petrology* (U. S. S. R.) 1955, 829-34 (in English, 833).—Silica gel prepd. from Na₂SiO₃ and HCl in 1931 was subjected to x-ray analysis in 1934 and showed diffraction properties. These were stronger when the silica was again x-rayed in 1935. The pH of the original gel, in 1931, was 2.1; in 1934 it was pH 8.8; and in 1935 it was 10.4. It is claimed that when the gel is washed, some Na is retained within the gel. Upon crystn. the Na becomes released. Na and thus an increase in pH occurs. This state of the Na in the gel is represented as follows: $[Si_2O_5 \cdot yH_2O \cdot zNaOH] \cdot 4OH^- \rightarrow 4H^+$ or $[xSiO_2 \cdot yH_2O \cdot zNaOH] \cdot (OH)_2^0$. In the first case the particle is positively charged, in the second case it is neutral. Since the crystn. goes in the direction of the quartz structure there is an orientation in the lattice of the Si and O atoms whereby the Na is forced out. J. S. Joffe

A 18-11A METALLURGICAL LITERATURE CLASSIFICATION

E-2

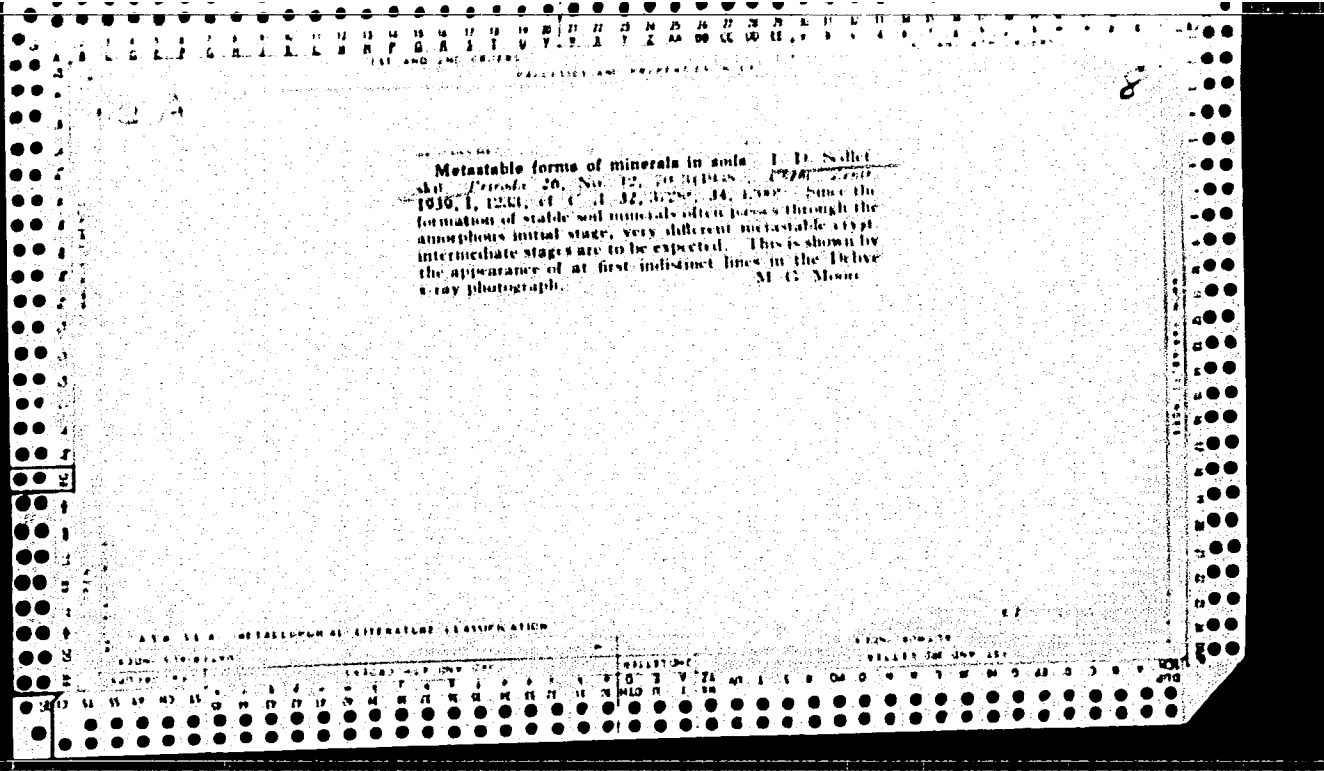
117 AND 118 (2018) 117 AND 118 (2018)

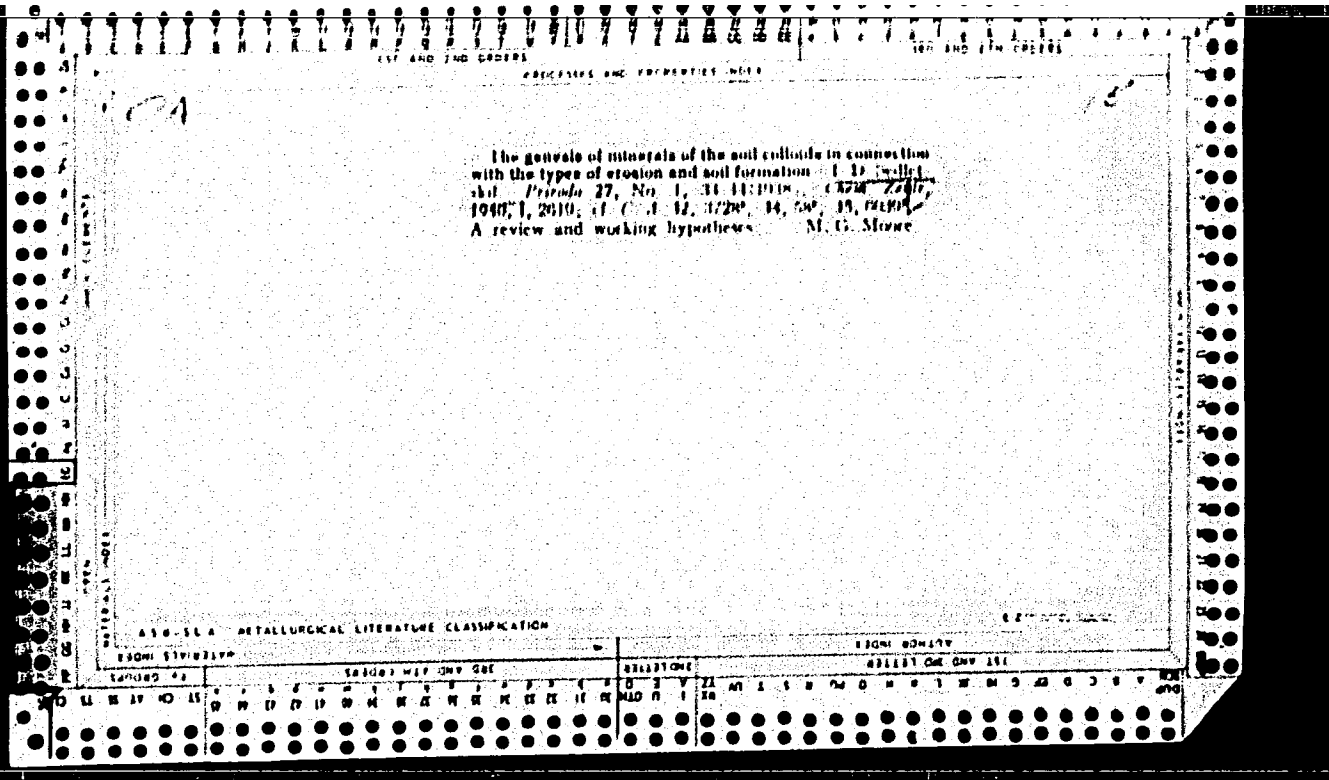
Soil colloidal minerals of the aluminum hydroxide group
 D. Soltzberg, *Soil Sci. Soc. Am.* 19, 221-233 (1955) in English. The improved definitions and further background observed in diffracton diagrams of soil colloid fractions when such fractions are pre-leached with strong HCl suggest the existence of an epidermal layer of aluminous material, coating, and continuous with, the individual clay mineral particles encountered in the various soil colloids. Such material is presumed to be amorphous from the standpoint of x-ray diffraction, but still not free to alter to bayerite, as does pptd. Al(OH)₃.

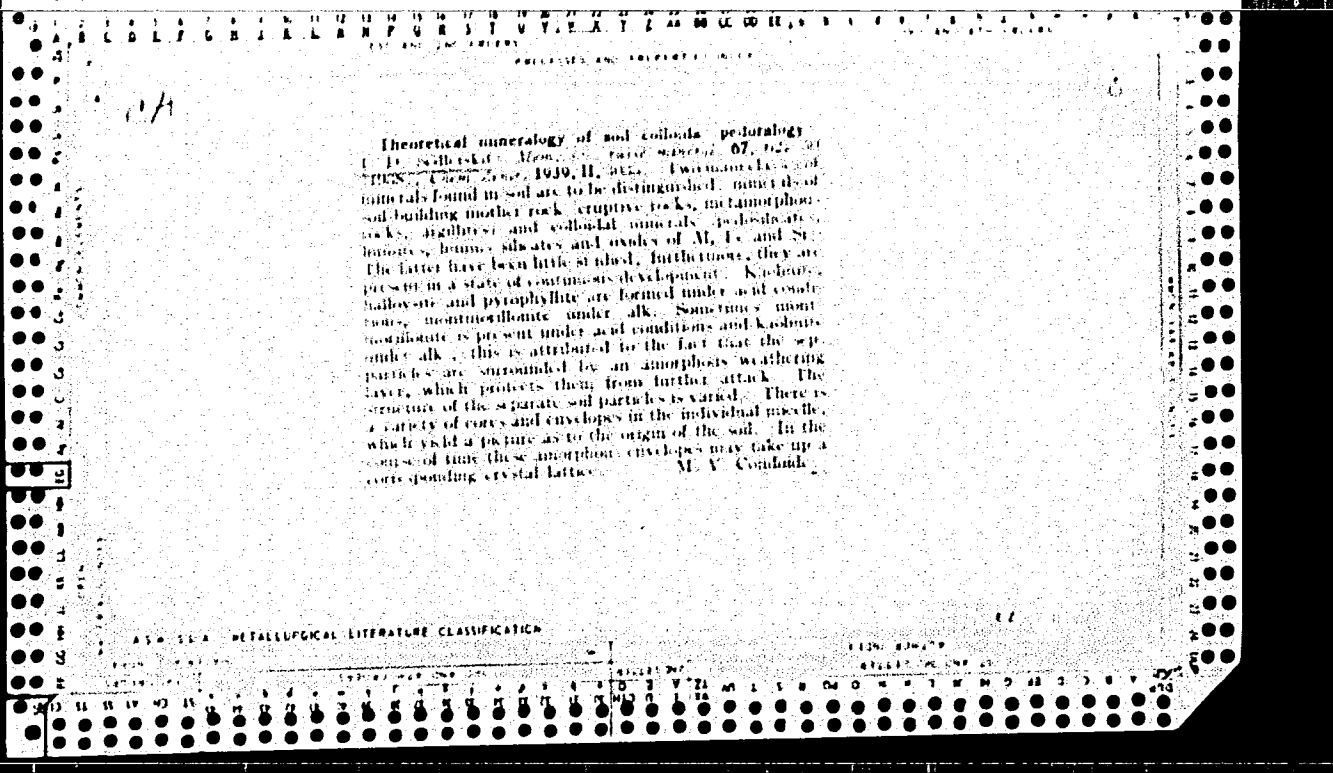
W. F. Bradley

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION

Region	Year	Author	Title	Journal	Volume	Page	Language	Notes
1	1955	Soltzberg, D.	Soil colloidal minerals of the aluminum hydroxide group	Soil Sci. Soc. Am.	19	221-233	English	







Classification of colloidal minerals of soils [L. L. Sedlitzkiy, *Geology of S. S. R.* 1939, No. 1, 181-3; *Khim. Referat. Zhur.* 1939, No. 7, 59-1; *Ch. A.* 34, 188]. The soil colloidal minerals (pedolithes) are divided into 3 groups according to the character of their complex colloidal inorg. minerals (pedosilicates), org. colloidal minerals (humatites) and org.-mineral colloidal minerals (humosilicates). S. considers that gels are the initial form of the colloidal particles. They are crystal through a no. of intermediate forms over stable minerals. Any mineral can be in an amorphous state (metastabilities), in an unstable state of cryst. structure (metastabilities) and of a cryst. structure which is stable under the given conditions (stabilities). W. R. Hein

AS & SEA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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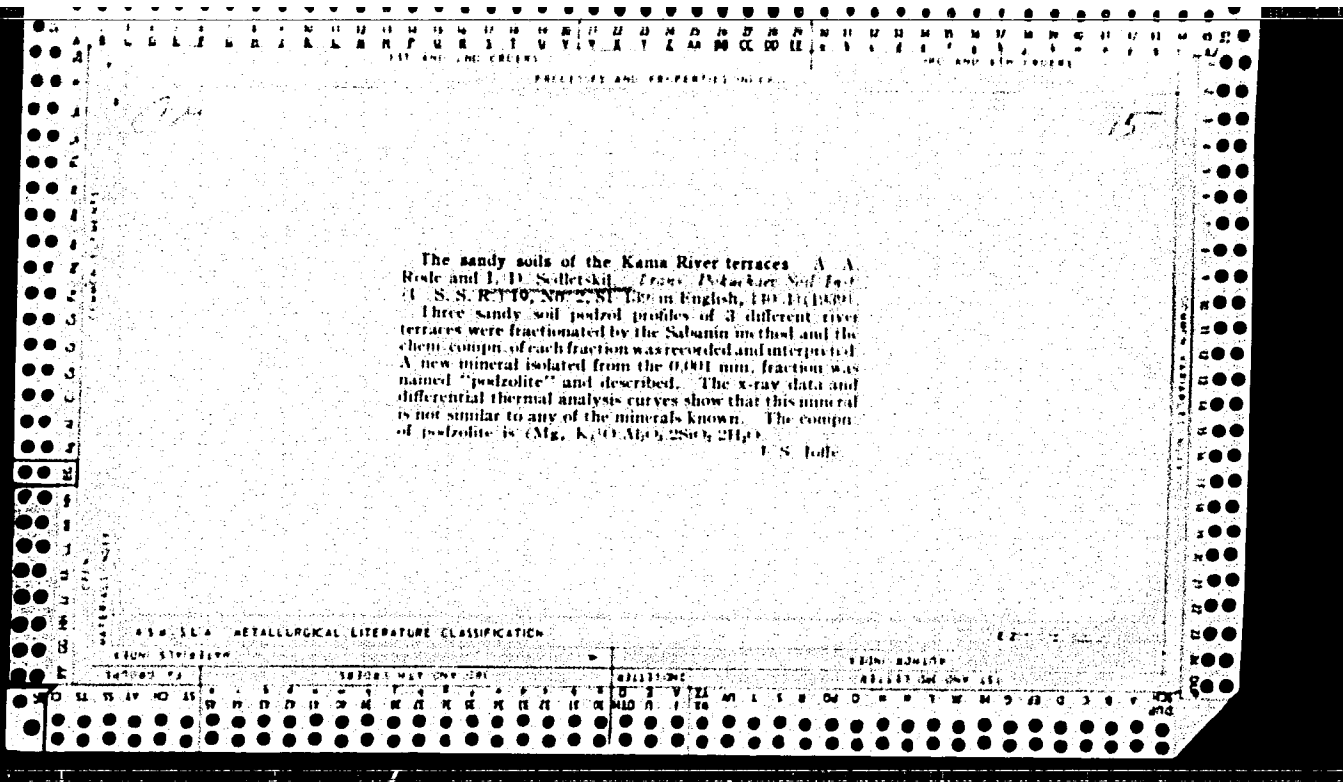
CH

21

X ray investigations of coals. I. D. Sedletskii. *Soviet Geol. O.* No. 9, 18 (311988); *Khim. Tsellyul. Pap.* 1939, No. 10, 185-7. The brown coals contain only the nuclei of graphite structure surrounded by a large no. of groups, mainly of hydroxyls. The fossil coals contain large crystals of graphite structure devoid of surrounding groups, but still sepl. from each other; their orientation leads to the formation of the graphite structure. X ray photographs show that 6-member rings are the basis of the coal structures; thread-like structure (characteristic of cellulose) was not found in the x-ray photographs of any coals. The carbohydrate and protein structures are not preserved in coal. The lignin spectrum is similar to the coal spectrum. W. R. Hess

ASB 31A METALLURGICAL LITERATURE CLASSIFICATION

Region	Country	Year	Author	Title	Journal	Volume	Page	Language	Notes
ASB	31A								



PROCESSES AND PROPERTIES

Genesis of montmorillonite and kaolinite and conditions of their joint occurrence in the colloids of soils and clays. I. D. Seifetskiĭ. *Compt. rend. acad. sci. U.S.S.R.* 22, 510-14 (1939) (in English); cf. C. I. 32, 3728. The minerals montmorillonite, beidelite and sericite constitute the colloids of alk. "solonetz" soils, whereas minerals of the kaolin group are found in the acid "podzol" soils. Solonetz soils from Trans-Volga, the Caspian plain, middle Asia and the Chirchik district, and podzol soil from the Kalinin district, the Moscow district and Katchalka were investigated. Montmorillonite prevailed in a solonetz whereas beidelite was present in the upper portion of a sulfate-chloride solonetz. The process of desalination of salt marshes results in a production of CaCO₃ from underlying gypsum. Beidelite is found above the gypsum layers but not below them where the medium is slightly acid. In podzol soils derived from clays, any original montmorillonite is altered to kaolin, which was demonstrated on concretions from Tuzluk-Dziri whose center was alk. and contained montmorillonite. That strata underlying coal beds (org. acid medium) contain kaolin clays was shown for the Uzbekistan deposits. Montmorillonite clays are located in regions which accumulate soil salts as in Caspian lowlands and the Crimean clays. In general, montmorillonite clays are found in accumulation solonetz regions, while kaolin clays occur in alluvial regions.

L. G. W. Strack

ASB. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

BIBLIOTECA

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PROCESSES AND PROPERTIES OF SOILS

Absorbing complex of soil—a paragenetic system of colloidal minerals. (I, II), *Sovetskii Geol. zhurn.*, 1958, 23, 228-231 (Russian) (English). The major colloids of the soil are composed of definite clay minerals (pedolites) and are neither zwitterions nor isomorphous. Different soils result from different soil forming processes. Typical pedolites of Russian alkali soils are gehobvite, montmorillonite (I), beuhllite and muscovite (II), those of podzol series are kaolinite, dickite, maerite, quartz and limonite. Thus pedolites of the montmorillonite group are typical of alkali soils and those of the kaolin group, acid soils. Soda alkali soils contain chiefly I and II, milled chernozem contains in addition halloysite and residual sericite and kerolite. The presence of I in certain chernozems and northern podzols indicates initial swamp-meadow development. During podzol development, the alkali pedolites gradually decompose and are replaced by podzol pedolites. The composition of pedolites in different soils is not the result of a casual combination of minerals but is a definite, natural paragenetic assemblage regularly distributed over the genetic horizons.

Nelson McKay, Jr.

AS 51 A METALLURGICAL LITERATURE CLASSIFICATION

Gedrolite in the alkali soils. J. D. Sedberry. *Compt. rend. acad. sci. U. R. S. S.* 23, 565 (1957) in English; cf. *C. A.* 32, 3403. -- The principal x-ray lines of gedrolite, $\text{Na}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 3\text{SiO}_2 \cdot 2\text{H}_2\text{O}$, have not changed on aging since 1937 but new ones have appeared. Powdergram evidence is presented to show the presence of this material in the colloids (0.2-2 μ) of soda alkali-soil horizons.
D. W. Pearce

ASD-3LA METALLURGICAL LITERATURE CLASSIFICATION

1A

15

Soil exchange cations and their geochemistry. I. I. Sedletskii. *Compt. rend. acad. sci. U. R. S. S.* 25:207-209 (1959) (in English).—Only Ca, Mg, H, Na and K (in order of decreasing occurrence in soils) are the principal exchange cations of the soil absorbent complex. Other metals are either not in the exchange condition or are in insignificant quantities; even K occurs in the exchange state only in negligibly small amounts. The exchange cations are irregularly distributed with regard to soil type: in black soils they are mainly Ca and Mg; in podzol soils 80-90% of the exchange vol. is H, 20-40% Ca and Mg; in solonchets Na, 50-70%, is the most important, with Ca and Mg 30% of the exchange capacity. The mineral colloids in these soils are, resp.: montmorillonite; geltronite and montmorillonite; kaolinite and montmorillonite. K enters mainly into muscovite-sericite in which it exchanges only to the extent of 3-5%. D. W. Pearce

A S H - S L A - METALLURGICAL LITERATURE CLASSIFICATION

PROCEEDINGS AND PROCEEDINGS

CP

Mineralogical transformations of aluminosilicate gels with time. I. D. Sedletska. *Mem. on the mineralog.* 08, No. 2, 201 (1939); *Khim. Referat. Zhur.* 1939, No. 11, 23. Preliminary results of lab. expts. of the mineralogical transformation of Al silicate gels with time for the detn. of the genesis of the soil colloidal minerals (pedolites) are given. Expts. showed that montmorillonite, kehlstrite and other similar minerals can be formed under ordinary conditions. The pedosilicates (montmorillonite, etc.) are formed in chernozems, chestnut, gray and dark gray, solonetz and other soils in the presence of excess moisture and at an increased temp. under moderate conditions. Quartz is formed in desert and semidesert soils with predominating high temps. (70-80°C). The complex Al silicate pedolite and the 1-component minerals can be formed in acid and in moist soils (the northern podzol soils, etc.). Minerals of the Al(OH)₃ group are formed in soils in which excessive stagnant moisture predominates.

W. R. Hunt

ASO-3LA METALLURGICAL LITERATURE CLASSIFICATION

REGION: 034110

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CA

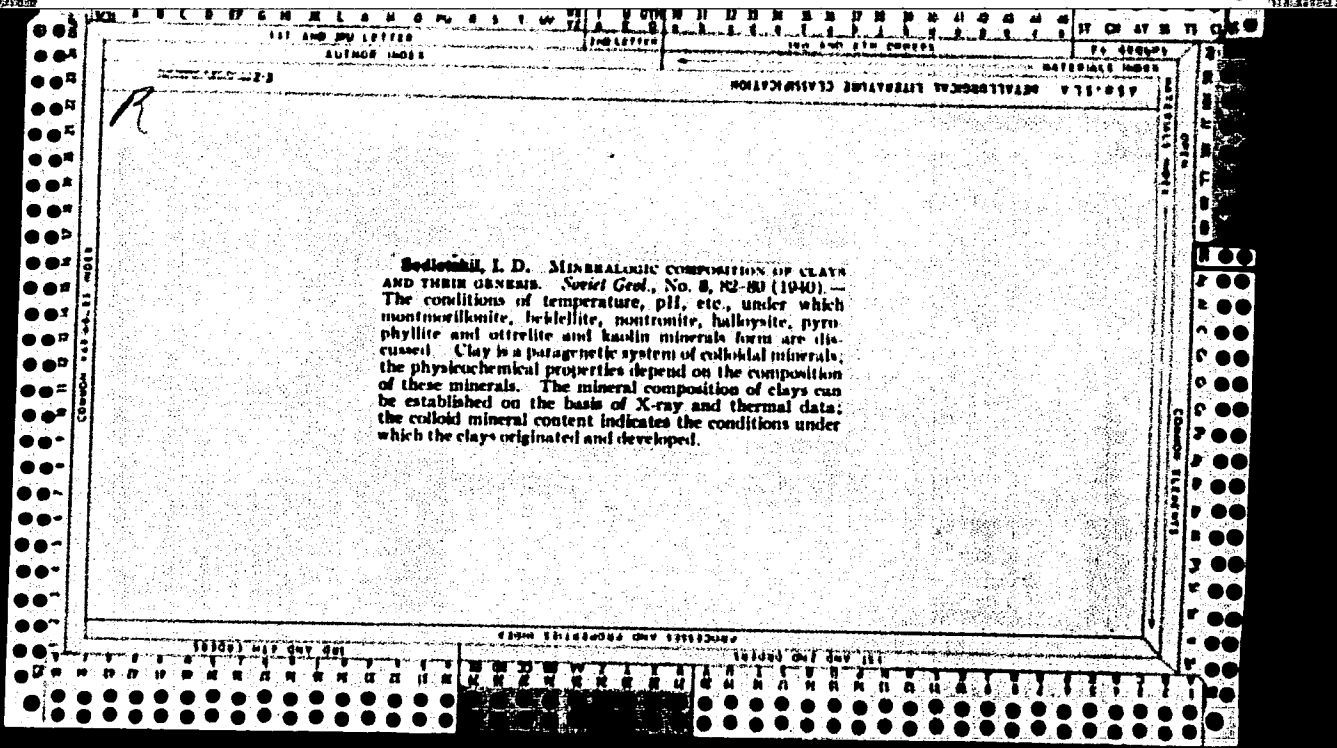
Application of different methods of peptization of clay for investigation of the mineralogical composition of its colloidal fractions. I. N. Antipov-Karataev, I. D. Solovetskii and S. M. Yusupova. *Colloid J. (U. S. S. R.)* 6, 133-34 (1940).--The international method is compared with the method of fractional peptization (cf. Tyulin, *U. S. S. R. J. (USSR)*). The second method could be used for the sepn. of amorphous and semicryst. compts. from the cryst. The 1st method sepd. the mixt. of minerals into groups of 2-3 minerals and, therefore, guaranteed completeness and accuracy of their detn. (the no. of lines on the tonnenogram never exceeded 10-15). A. A. P.

AS & SLA METALLURGICAL LITERATURE CLASSIFICATION

ACS.

ecology

Colloid-mineralogical composition of the soil absorption
complex. I. D. BUDLETNIK. *Prirada*, 1960, No. 7, pp.
17-27; *Khim. Ref. Zh.* 4 [4] 61 (1941). M.Ho.



A.I.S.

Equipment: Aggregates

Changes in standard Debye cameras for routine-mineralogical investigation of soil and clay colloids. I. D. SAKHAROV. *Zemledeya Lab.*, 9 [11-12] 1344-45 (1960). *Russian. Referat. Zhur.*, 6 [7-8] 37 (1961).--S. describes the changes made in the standard Debye cameras to produce the X-ray interference rings corresponding to $d \geq 20$ a.u. They permit the study of the xerographic and mineralogical composition of soil and clay colloids. M.Ho.

ABSTRACTS AND PROPERTIES INDEX

Ca

1

The genesis of the chernozem and solonetz soils in the Chernigov forest steppe. G. M. Ponomarev and I. I. Sedletska. *Tranz. Dokuchiev Soil Inst. (U. S. S. R.)* 24, 243-307 (in English, 308) (1940). - Data are presented on the mineralogical compn. of the fractions, 0.25 to 0.02 and 0.02 to 0.002 mm. of the loess in the region; the chem. compn. of the ground waters; the water sol. substances, humus and carbonate in the soils on this loess; the exchangeable cations in the exchange complex; mineralogical compn. of the soils; the total compn. of the soils and of a no. of colloid fractions; the minerals of the colloid fractions, their x-ray patterns and the methods used in deciphering these patterns; the compn. of pedolites (secondary minerals as a result of the soil-forming processes) of leached chernozem. Among the minerals found in the soils are the following: quartz, montmorillonite, gedrolite, muscovite, sericite, Mg beidellite, halloysite, goethite, vermiculite, sepiolite, talc-like mineral, dolomite, calcite and magnesite. J. S. Joffe

ASO-330 METALLURGICAL LITERATURE CLASSIFICATION

13

PROCESSES AND PROPERTIES INDEX

X-ray investigation of humus substances. I. D. Skellertskii. *Prirada* 26, No. 3, 15-18; *Chem. Zentr.* 1940, I, 3387; cf. C. I. 34, 6793. —On the basis of a crit. examn. and evaluation of x-ray diagrams of natural and artificial humic substances from various sources the conclusion is reached that regardless of the origin of such substances their basic structure must be aromatic (graphite lattice).
M. G. Moore

METALLURGICAL LITERATURE CLASSIFICATION

ALPHABETIC INDEX

LIST AND NO. LETTERS

REMARKS

GROUPS

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CA

Mineralogical composition of clays and their physical and chemical properties. I. D. Solovskii and S. Yusupova. *Compt. rend. acad. sci. U. R. S. S.* 20, 244 (1940) (in English).—An account is given of a detailed investigation of various specimens of Middle-Asiatic clays and loesses. The mineralogical compn. was detd. separately in the fraction $2-0.2\mu$ and $< 0.2\mu$ by the thermal and x-ray methods. After prepn. of the clays by international method A and subsequent dispersion with NaOH the fractions were segregated by a centrifuge. The adsorption was detd. according to the universal method of Gohoutz. The data point to the existence of a definite relation between the phys. and chem. properties of clays on the one hand and the compn. of the respective minerals on the other. The phys. properties are not necessarily connected with the available quantity of colloids. The chem. compn. depends directly on the compn. of the respective minerals. Fersman's contention that the paragenesis of elements depends on the paragenesis of minerals was fully confirmed. Ca and Mg are in the main connected with montmorillonite, Ca and Na with micas, while Mg is also connected with saponite. Variations in the content of these elements as well as the ratio SiO₂/Al₂O₃ are explained by the differences in the quantity of available minerals and their proportion in the mixt. 4 references. A. H. Krappe

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Argillaceous minerals closely approaching halloysite
I. D. Solovskii and S. Yusupova. *Compt. rend. acad.
Sci. U.S.S.R.*, 20, 104 (1959) (in English). X-ray,
thermal and chem. examn. of the colloidal fraction (0.2
 μ) of the Ablyk clay gave evidence of the new mineral,
ablykite, which analyzed SiO_2 45.12, Al_2O_3 30.01, Fe_2O_3
2.88, CaO 0.20, MnO trace, $CaCO_3$ 1.0, MgO 1.2, K_2O 0.12,
 Na_2O 0.151, P_2O_5 0.100, H_2O (in solid soln.) 4.60 and
 H_2O (hygroscopic) 3.24%. Heating curves closely ap-
proach those of halloysite but a comparison of its powder
diagram with those of other argillaceous materials shows
it to be new. The ignition products of ablykite and hallo-
ysite also show different x-ray patterns. The formula is
believed to be $R^{10}2R_2O_4 \cdot 6SiO_4 \cdot 6H_2O$. K, Mg and Ca are
fixed in the lattice in unexchangeable form.

I. W. Place

A.C.S.

100000

Reentgenographic Tables for Identifying Minerals in Soil Colloids. I. D. Sadokrasnii. Edited by I. N. Antipov-Karataev. Akad. Nauk S.S.S.R., Moscow and Leningrad, 1941. 42 pp. Price 3.70 R. Reviewed in *Khim. Referat. Zhur.*, 4 [7-8] 57 (1941). M.Ho.

PROCESSES AND PROPERTIES INDEX

Classification of minerals of surface weathering. I. D. Solletskii. *Soviet Geol.* 1941, No. 3, 21-35. -- Theoretical and review. S. discusses various systems of classification of minerals formed during the weathering of rocks, in particular of the surfaces of the Al silicates, as montmorillonites or palygorskites; and of the Al-Fe-Mg silicates, in various stages of hydration and colloid formation. E. H. Rathmann

ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION

GROUPS	MATERIALS INDEX																										
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Electronographical studies of soil colloids. I. D. Selletskii and I. Iatarmova. *Podolgy* (U. S. S. R.) 1941, No. 9, 33-43. For the study of soil colloids with the electronograph a thin film, less than 10⁻³ cm, is used. The fraction less than 0.2 μ or less than 0.02 μ is used for this purpose. Several drops of these suspensions are played on a cellulose membrane, less than 10⁻³ cm, in thickness, attached to a metal plate with perforations. The prepn. is placed in the electronograph and subjected to electron rays. As these pass through the perforations, the electron

waves are diffracted by the colloids giving a system of concentric circles on the fluorescent screen. After the desired sharp focus is obtained, a plate is inserted and a photograph obtained. The exposure lasts a couple of sec. The rings of various intensity can be expressed in terms of counts of the screens (d). For this purpose the Debye rings are measured in mm, and d is calculated from the formula $d = D\lambda$ or $d = D\lambda^2$, where r = the radius of the ring on the electronogram; d = the distance between rings; D = a const. of the app. (in the case under consideration D = 1100 mm, which is the distance from the prepn. to the photographic film); λ = the length of the waves. The authors analyze the formula and show the derivation of its members and its application to the data obtained with soil colloids. The kaolinite mineral was used as a standard of comparison. An electronogram of humic acid, used by Selletskii for x-ray studies, shows 7 Debye rings. From data obtained and with the Fuchs formula for humic acid the structural crystalchem. basis of the humic acid is presented. By use of the patterns of the mineral and org. colloids the authors proceed to give a picture of the organo-mineral gels. On the electronograms the lines of montmorillonite and of humic acid are clearly shown. Various possibilities of attachment of the 2 types of colloids are suggested. An electronographic study of red earths does not substantiate the assumption of a no. of investigators that these soils contain free alumina minerals. A study of the changes in the colloid makeup of solonchaks caused by heating shows that the characteristic Debye rings of montmorillonite remain even after heating with one exception; the first ring is decreased; it had a d value of 10.5 Å, instead of 15-18 Å. I. S. Joffe

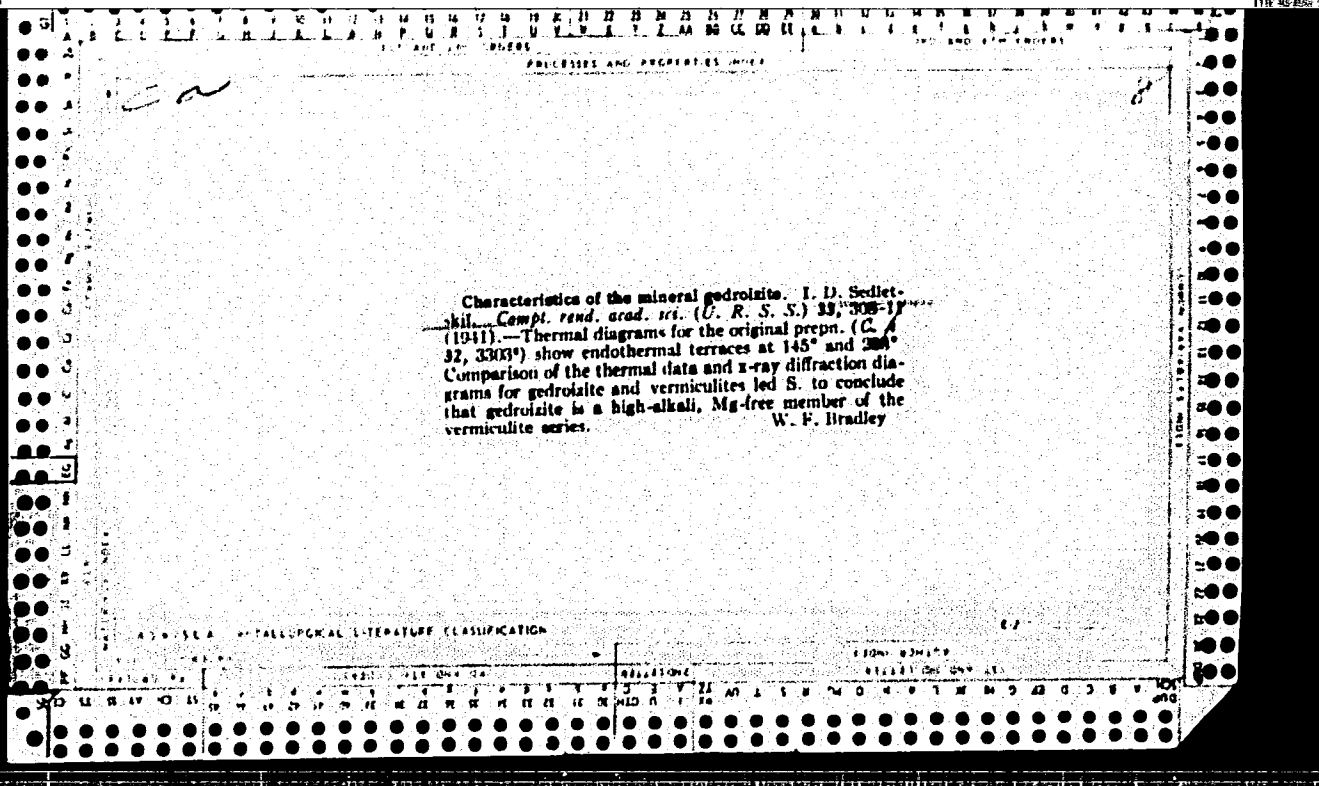
15

Distribution of copper in the main soil types of the U. S. S. R. I. D. Sedletskii and I. Ivanov. Compt. rend. acad. sci. R. S. S. U. 31 (1911) (in English). The Cu content of certain Russian soils was: red earth, 0.011; chernozem, 0.00048; peaty-podzolized, 0.0032; highly podzolized sandy, less than 0.0003%. The Cu content was const. throughout the profile of the red earth. It was relatively high in the A horizon, but in the A horizon and accumulated in the B horizon of podzols. The Cu content decreased with depth in chernozems and increased with depth in the humic-gleyey soils. A subtropical podzol contained 0.0052% Cu and the horizon differences were less pronounced than in the northern podzol. A podzolized gleyey subtropical soil (U) contained 0.008% Cu which was uniformly distributed through the profile. The colloid of the horizons of U contained 0.010-0.0104% Cu. The increased Cu content of the colloid shows the influence of adsorption on the migration of Cu in the profile. Weathering increased the Cu content of olivine basalts from 0.0002% in the rock to 0.0110% in the friable weathered products.

Nelson, Mc Kaig, Jr.

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

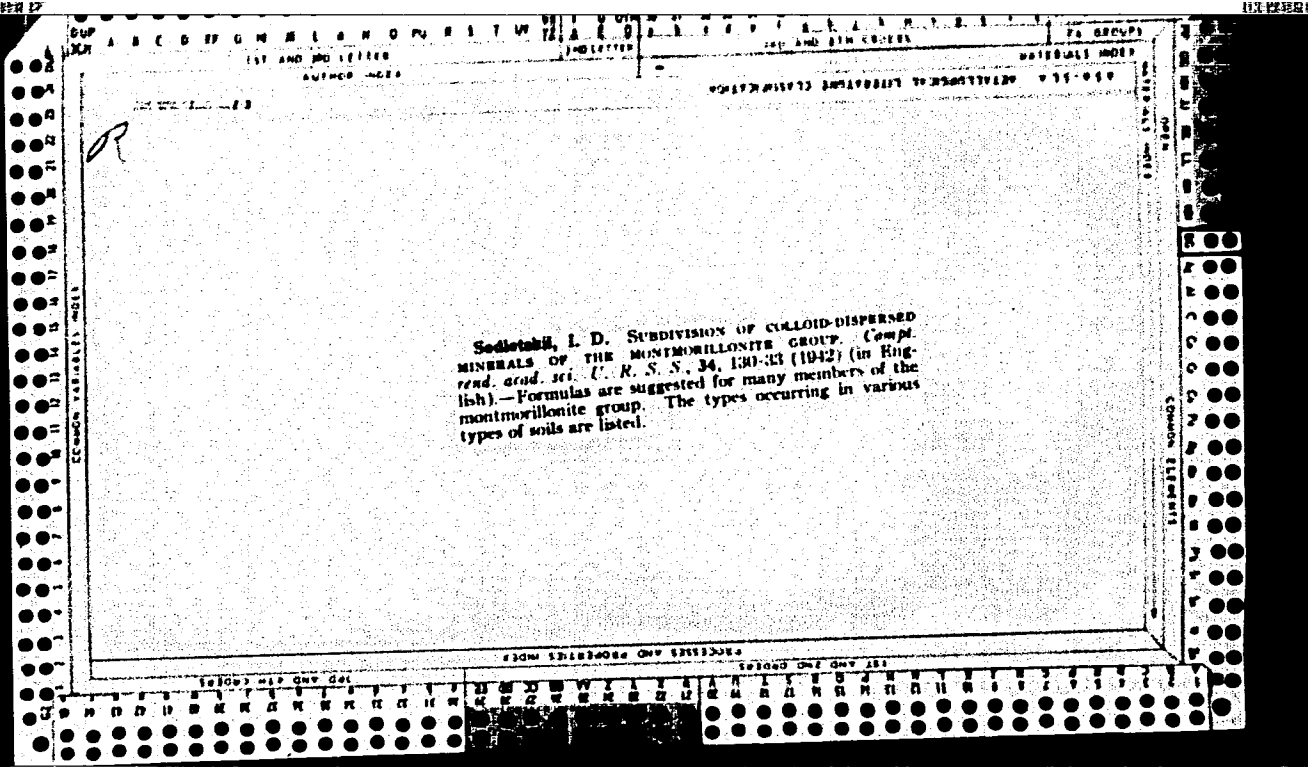
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15

Colloidally dispersed minerals of the principal soil types
 1. D. Sedetskiĭ. *Pedology* (U. S. S. R.) 1942, No. 3 1,
 72 (in English, 72).--S. considers soil colloids in the
 range of 2 μ and lower. In this range, no primary minerals,
 as a rule, are found. All minerals of the zone of weathering,
 including the soil minerals, are a distinctive group and
 differ from the primary minerals of the deep-seated native
 rock. The specific mineral colloids of the soil are named
 "pedolites." S. shows that each soil zone has its specific
 group of minerals. In the gray soil zone we find some be-
 idellite and muscovite-sericite; in the tundra, hydrous mica;
 in podzolized soils of the north, quartz and kaolinite in the
 A horizon and (hydro) goethite in the B horizon; in the
 podzolized soils of the subtropics, quartz, halloysite, goth-
 ite and nontronite; in the red soils of the subtropics, hal-
 loysite, gothite and (hydro) hematite; in laterites, meta-
 halloysite, gibbsite and hematite. S. points out that
 podzols formed on acid (granite) or on basic (basalt) rocks
 contain the same pedolites: quartz and kaolinite in A, and
 Fe. The montmorillonite and muscovite-sericite mini-
 erals prevail in chernozem irrespective of the parent mate-
 rial. Sokonetz contains montmorillonite, beidellite and
 gedroizite. Regur from Eritrea contains montmorillonite
 and muscovite-sericite. Regur from India contains, be-
 sides the above, also some halloysite. Red soils of Erithea,
 Ethiopia and India contain the same minerals as the
 laterite. In unconsolidated sedimentary deposits S.
 sometimes finds montmorillonite even in podzols. He
 ascribes its source of origin to the parent material.

J. S. Joffe



170, 16.

Colloid-dispersive mineralogy, its problems and methods. L. D. Sedletzki (*Compt. rend. Acad. Sci. U.R.S.S.*, 1942, 00, 163-170).— From a review of the results of recent work on the genesis of highly dispersive formations, e.g., soils, loesses, clays, muds, the following five laws of colloid-dispersive mineralogy are enunciated: (1) the composition of these minerals is governed solely by the character of the weathering process, (2) the composition of the minerals formed by weathering of different rocks represents paragenetic association of argillites determined by the weathering conditions, (3) the paragenesis of elements forming such fractions depends on the paragenesis of colloid-dispersive minerals, (4) the genesis of the minerals is linked up with the conditions of the medium, e.g.: montmorillonite-type minerals are formed under neutral or alkaline conditions, and kaolin-type under acid conditions, (5) the weathering of rocks passes through a series of stages the duration of which is determined by physico-geographical and climatic conditions.

A. R. P.

Thermal characteristics of humic acids. I. D. Kozlovskii and G. A. Shchukova *Trudy Vsesoyuzn. Nauch. Issled. Inst. Khim. Prilozh. Khim. Prilozh.* 1972, **20**, 257. Thermographs of humic acids from peat and soil show similar characteristics, viz., endothermic interval 90-100° due to separation of hygroscopic H₂O; exothermic interval 200-400° possibly due to combustion of certain ingredients; endothermic interval 630-635° due to separation of H₂O as a result of transformation of CO₂H, OH, and OMe groups; exothermic interval 770-800° due partly to burning of bituminous substance and a complex exothermic effect at 1100° when humic acids decompose. The data support those obtained by X-ray and electrographimetric methods. C. R. H.

Ca

Composition of colloid dispersion minerals and the
 metathetic capacity of glauconites from Saratov. I. N.
 Antipov-Karataev and I. D. Budetshil'skiy. *Comp. rend.
 Acad. sci. U. R. S. S. 39, 115-17 (1943).*—X-ray patterns
 of glauconites before and after satn. by solns. of chlorides
 of H, Li, Mg, Na and Ba showed no structural change.
 these samples are estd. to consist of 50% glauconite, 40%
 montmorillonite and 10% sericite. At pH = 9, the ex-
 change capacity of one glauconite is 31.08 milliequiv. of
 M BaCl₂ per 100 g. material; a change of 1 pH unit
 changed its capacity by 4.0 milliequiv. The correspond-
 ing figures for permittite are 450 and 40 milliequiv.
 Cyrus Feldman

2

A.S.D. 554 METALLOGICAL LITERATURE CLASSIFICATION

BTR

26

4708 Kolloidno-Dispersiia Mineralogiia. (Colloidal Dispersions in Mineralogy.) I. D. Syllktski. 114 pages. 1945. Academy of Sciences of the U.S.S.R., Moscow and Leningrad. U.S.S.R. (QE:364 S:20k)

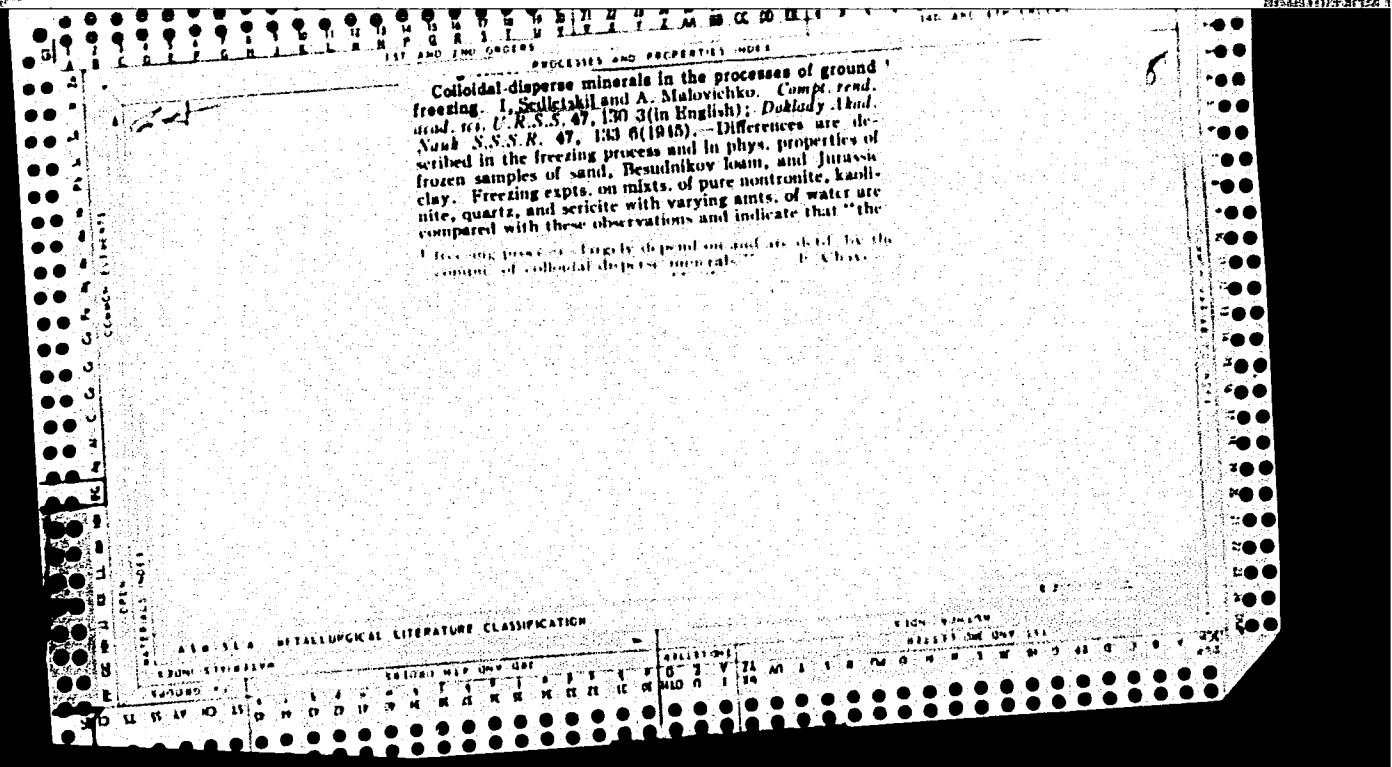
This book is of particular interest to naturalists, geologists, mineralogists, soil scientists, geochemists, biologists, geographers, and physical chemists. It introduces new concepts and presents new ideas concerning physicochemical balances which exist in soils, as a result of complex chemical and biochemical reactions.

See also:

- 3808** (iron silicate-sulfide-oxide systems)
- 3846** (chemistry of Cl and Ta)
- 4321** (porosity of adsorbent materials)
- 4355** (measuring streaming birefringence and dichroism)
- 4356** (microscope study of adsorption phenomena)
- 4466** (spectra of fluorine-supported flames)
- 4590** (developments, 1950-51)
- 4725** (phosphate chemistry--book)
- 4791** (carbon-black structures)
- 4902** (new energy concept in thermodynamics)

Dr. abs

Variation in parameters of montmorillonite as affected by petroleum.
I. D. Sedletzki and S. M. Jusupova (*Compt. rend. Acad. Sci. U.R.S.S.*, 1945, **68**, 27-30).—A no. of clays containing the montmorillonite structure from oil wells, petroliferous regions beyond the boundaries of wells, and from non-petroliferous areas are investigated by X-ray analysis by the Debye-Scherrer method. The absorption of petroleum causes an extension along the *c* axis of the montmorillonite lattice. In the natural state, this extension is greater in specimens from oil wells and less in specimens from regions outside the wells, due to the fact that the former absorb heavier hydrocarbon fractions while the latter absorb only volatile components. The effect of petroleum on specimens from non-petroliferous deposits is investigated. Saturation with volatile oil components causes an increase in $d_{(100)}$ of 4.79 Å and 7.00 Å in two clays, while saturation with oil causes an increase in $d_{(100)}$ of 17.49 Å and 17.62 Å. The mechanism of absorption of petroleum in montmorillonite is discussed.
S. R. R.



117 AND 118 SERIES

119 AND 120 SERIES

PROCESSES AND PROPERTIES INDEX

BC

B - III - 1

Many studies of processes of the ... I. Sedvicki, M. ... and A. ... *Trans. Am. Inst. Min. Engrs.* ... U.S.S.R. ... 1954-1955. ... indicates the changes taking place in the internal structure of specimens of soil which are treated ... with ... beam and Jurassic clay show that fracturing in these two soils is different. In definite cases investigated, the ... are not embryos from which ice intercalations are formed. D. L. P.

ASME S.E.A. METALLURGICAL LITERATURE CLASSIFICATION

117 AND 118 SERIES

119 AND 120 SERIES

117 AND 118 SERIES

119 AND 120 SERIES

Physico-Chem. Lab., Soil Inst., Acad. Sci. (1946)

"To the farming utilization of peaty-boggy soils"

Rochovedaniye, No. 12, 1946.

SEDELETSKIY, I. D.

PA 52T75

USSR/Minerals
Geology

Oct 1947

"Rostov Scientific Geological Society," I. D. Sed-
letskiy, Pres of Soc; K. N. Negadayev, Secy of
Soc, $\frac{1}{2}$ p

"Zapiski Vserossiyskogo Mineralogo Obshchestva" Series 2,
Part LXXVI, No 3

Reports first meeting of Rostov Scientific Geolog-
ical Society convened at State University imeni
V. M. Molotov, 19-22 Apr 1947. Names members of
the board, and gives roster of members. Some 200
members admitted. Asserts prime duty of society is
to assist State in development of natural mineral
resources of USSR.

52T75

SEDLITSKIY, I. D.

PA 16T59

USSR/Soil Science
Copper

May 1947

"The Role of Soil Formation in the Geochemical
Distribution of Copper," I. D. Sedletskiy, 5 pp

"Priroda" No 5

Discusses work done by A. E. Fersman (1939) and
Arkhangel'skiy and Rozhkova on the distribution
of copper in the main types of soil of the Soviet
Union, and surface theory of accumulation of
copper in the mud of the sea and sedimentary
rock.

16T59

CA

Complication of mineral molecules in the process of weathering of massive crystalline mineral deposits. I. D. Solov'ev, *Doklady Akad. Nauk S.S.S.R.* 50, 311-13 (1977). Exam. (by x-ray and thermal methods) of weathered rocks showed that kaolinite is not invariably the

predominant product of weathering; often it is completely absent. More often one finds such minerals as montmorillonite, illite, and nontronite which are more complex than kaolinite. Possible reactions causing such changes are briefly discussed. In many cases the weathering products are mols. of more complex minerals than the starting materials. The process involves sorption by the initial gel of various elements (Ca, Mg, K, Na, Fe, Al, etc.) from aqueous solutions that always circulate in the cortex of the weathering zone. G. M. Kosolapoff

SEDLITSKIY, I. D., PROF

TR 5716

USSR/Academy of Sciences
Minerals

Jan 1948

"Academician V. M. Severgin and the Study of the Paragenesis of Minerals (150th Anniversary of 'First Principles of Mineralogy')," Prof I. D. Sedlitskiy, 2 pp

"Vest Ak Nauk SSSR" No 1

Geologo-mineralogical circles accepted the opinion that the study of the paragenesis of minerals was first formulated by the German, Breithaupt, in 1849. However, this is not the case. Study of the paragenesis of minerals was formulated in 1798 by the Russian scholar, V. M. Severgin.

FDB

6672

SEDLITSKIY, I. D.

USSR/Minerals
Mica
X-Ray, Analysis

Apr 1948

"Chrome Micas," Prof I. D. Sedletskiy, $\frac{1}{2}$ p

"Priroda" No 4

Describes work of Whitmore, Berry and Howley on this subject in USA. Investigations were chemical, optical and X-ray. Special attention was paid to fuchsite and mariposite.

FDB

78163

SEDLITSKIY, I. D.

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001447620006-1

Sedletskiy, I. D. "Priority of the Russian scientist V. M. Severgin in studying the paragenesis of minerals," uchen. zapiski (Ist. n/D gos. un-t im. Molotova), Vol. II, 1948, p. 7-12

SO: U-3566, 15 March, 53 (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

SEDELETSKIY, I.D.

Sedletskiy, I.D. "Mineralogical classification of clays," Uchen. zapiski (Rost. n/D gos. un-t im. Molotova), vol. XI, 1948, p. 13-19 ---Bibliog: 15 items

SC: U-3566, 15 March, 53 (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

SEDLITSKIY, I. D.

USSR/Geography
Minerals

Jul/Aug 48

"Geography of Minerals," I. D. Sedletskiy, Rostov
State U, 6 pp

* Iz Ak Nauk SSSR, Ser Geog i Geofiz" Vol XII, No 4

Shows that only colloidal dispersed minerals are
geographically distributed. Discusses scientific
significance of geography of minerals as method for
reconstructing climate and physical and chemical
conditions of past eras. Submitted by Acad A. A.
Grigor'yev 13 Jun 1948.

FDB

1/4953

SEDLITSKIY, I. D. (Co-author)

See: SHAMRAY, I. A.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620006-1"

Sedletskiy, I. D. and Shamray, I. A. - "Mineralogy of the Sulini-
skiy fire clays," Uchen. zapiski (Rost. n/D gos. un-t im.
Molotova), Vol. XI, 1948, p. 21-35 -- Bibliog: 14 items

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

С. 159-160, т. 3.

35915. ...rent. onograficheskiya kharakteristika nerotornika iz chasov-para. mineral.
...oralk (L'vov), No. 3, 1949, S. 159-160--Bibliogr.: 1 nazv.

30: Letopis' Zhurnal'naya Sluzhba, No. 49, 1949

SEDETSKIY, I. D.

20578 SEDETSKIY, I. D. Novyye dannyye o sostave, genezise i rasprostraneni
monoterrits. Priroda, 1949, No. 6, s. 52-53.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva - 1949

SEDLITSKIY, I. D.

Feb 49

USSR/Minerals

Refractory Materials

Clays

"The Mineralogy of Refractory (Clay) Slates of the Baksan Deposit in the Northern Caucasus," P. S. Samodurov, I. D. Sedlitskiy, Rostov/Don State U imeni Molotov, 3 pp.

"Dok Ak Nauk SSSR" Vol LXIV, No 5

Subject deposit is located in Kabardinskiy, Azerbaydzhan SSR, on left bank of Baksan River, opposite village of Elyyy. Analyzes cryptocrystalline substance which is the basis of this deposit, and determines that it belongs to the monothermite class. Submitted by Acad D. S. Belyankin, 29 Nov 48.

PA 29/49T74

CH

X-ray characteristics of the mineral "monothermite"
I. D. Seleznevskii (Gosudarstven. Vys. univ. M. Moskva
1947). Doklady Akad. Nauk S.S.S.R. 67, 351 (1949).
I. D. Seleznevskii (Byull. Gosudarst. Keramich. Inst. No. 1,
10 (1952) described monothermite as a new independent
mineral in the refractory clays of Chasov-Yar, with
a characteristic endothermic effect on the dehydration

curve at 550°, but without an exothermic effect at
higher temps. The compn. is given as $0.2R_2O \cdot Al_2O_3 \cdot$
 $3SiO_2 \cdot 4H_2O$ (R = K₂O, Na₂O, MgO, CaO). The
same mineral was recently discovered in many other sedi-
mentary deposits, e.g. in the Malkov Stavropol region
and the Don Basin, with the same thermal and chem. prop-
erties. The x-ray powder diagrams show characteristic
differences from muscovite, kaolinite, and illite; especially
characteristic is the line $d = 10.31 \text{ \AA}$, while other lines are
near some of muscovite and kaolinite. Monothermite
is apparently intermediate between these 2 minerals, al-
though its independent character is beyond doubt. W. Eitel

CA

7

Mineralogy of white clays of the Rostov region. I. D. Sakhelashvili. *Doklady Akad. Nauk S.S.S.R.* 69, 70-72 (1949).—The fractions below 0.001 mm. size of particles were examd. by microscopic, chem., x-ray, and thermal methods. In 14 of the examd. 16 deposits, monothermite was observed; one contained halloysite, another one kaolinite, as the characteristic clay mineral. The monothermite clays show endothermic effects at 110-140°, and 500-580°; an exothermic effect at 900-1100° is entirely, or nearly entirely, absent. The x-ray diagrams of the monothermite clays are identical with those of the type mineral of Chassov-Yar (Belyankin), with addnl. highly dispersed quartz. The chem. analyses of the Rostov monothermite clays are also similar to that given for the Chassov-Yar mineral, but with rather wide variations in the SiO₂:Al₂O₃ ratio (1.2-1.4 to 2.0), while Belyankin postulates 1:3. The (Ca, Mg, K₂, Na₂O):Al₂O₃ ratio varies between 0.035 and 0.3:1 (Belyankin postulates

0.2). The water content is in most cases 2 mols. The halloysite clay shows only an endothermic effect at 600°, and an exothermic effect at 930°; the kaolinite the corresponding effects at 600 and 1000°. The compn. of these clays is normal, with highly dispersed quartz, and metahalloysite in the halloysite clay, indicated by a lower than normal water content. The genesis of the monothermite clays is explained by the weathering and chitritation of the Don Basin slates, while the kaolinite is derived from the cryst. (granite) rocks of the Asov massive. All examd. clays are high or moderate *refractive*.

W. Ford

CH

Magnesium monothiermite. I. D. Savel'skii and P. S. Samoilov. (Molotov, Nov. Univ. R5668 on 1 Nov). *Zapiski Vostochn. Mineral. Obshchestva* (Mem. Soc. Russ. Mineral.) 78, 271-6 (1949); cf. Belvankov, C.A. 32, 52, 60. While the original monothiermite always contains K₂O, a new K-free, MgO-containing variety was detected in the Malok. sedimentary series (middle Oligocene), in septaria horizons, with calcite, clays, and mal. The mineral is assocd. with the common accessory minerals of fine-grained sediments of this kind. The fractions below 0.1 μ gave the typical thermal curve of monothiermite with two endothermal effects at 140° and 510°. The exothermal heat effect at 310 and 400° indicates some org. substance, and the slight heat absorption at 380° the presence of some geothite. The chem. analysis corresponds to the formula $0.26\text{MgO} \cdot \text{Al}_2\text{O}_3 \cdot 2.85\text{SiO}_2 \cdot 2.6\text{H}_2\text{O}$. The H₂O content of Mg-monothiermite is higher than that of the ordinary (K) variety of the mineral. The *n* of the calc. aggregates is 1.57-1.60, the birefringence about 0.022. W. Kretz.

SEDLETZKY, I.D.

2808. New variety of a clay mineral — I. D. SEDLETZKY (*Priradu, Acad. Sci. U.S.S.R.*, 39, No. 10, 48, 1950; abstracted *Geol. Mag.*, 2, 239, 1954). The name medmontite (*Miner. Abstr.*, 11, 124, 1953) is replaced by cupromontmorillonite (*Miner. Mag.*, 29, 979, 1953).

Mineralogical determination of sediments. I. I. Sedlytskii and P. S. Samolurov (Rostov, State Univ. *Zapiski Vsesoyuz. Mineral. Obshchestva* (Mém. soc. russ. minéral.) 79, 137-41 (1950).—The detn. of sedimentary rocks is based on an accurate identification of the clay minerals, especially by the differential thermal analysis, for which characteristic examples are given, with halloysite, metahalloysite, montmorillonite, and monothermite, from different horizons, schists, slates of the N. Caucasus and the Don Basin. Av. chem. formulas are given for the clay minerals. The supremacy of this method over the paleontological detn. is due to the frequency of horizons which are entirely lacking fossils. It is an important

supplement also to the methods of the heavy minerals.

W. Eitel

SEDLETSKIY, I. D.

Copy

✓ New mineral magnymontmorillonite. I. D. Sedletskii. *Priroda* 40, No. 2, 61-2(1961); *Mineralog. Abstr.* 30, 230 (1964).—A magnesium variety of montmorillonite from Pliocene beds in the Tatar republic was described by Kirsanov (cf. *C.A.* 43, 977b). K.'s analysis gives a formula $0.3\text{MgO} \cdot \text{Al}_2\text{O}_3 \cdot 6\text{SiO}_2 \cdot 2.5\text{H}_2\text{O}$. Yellowish brown flakes have neg. birefringence 0.020-0.040, endothermal effects at 120-150° and 750-770°, and the x-ray pattern of montmorillonite. It is now named magnymontmorillonite.

K. L. C.

SEDIMENT, I. D.

Loess

Colloidally-dispersed minerals and eolian origin of loess in the lower Dan region,
Dokl. AN SSSR, 81, No. 5, 1951

MONTHLY LIST OF RUSSIAN ACCESSIONS. Library of Congress, April 1952. UNCLASSIFIED.

SEDLITSKIY, I. D. PROF.

LOMONOSOV, MIKHAIL VASIL'EVICH, 1711-1765.

Priority of M. V. Lomonosov in the study of colloidal minerals. Vest. AN BSSR 22 no. 3, 1952.

Monthly List of Russian Acquisitions. Library of Congress October 1952.

SEDLITSKIY, I. D.

Colloidally dispersed minerals as an aid in solving several problems of rock metamorphism. I. D. Sedlitskiy (V. M. Molotov State Univ., Rostov-on-Don). *Doklady Akad. Nauk. S.S.S.R.* 86, 821-3 (1952); cf. *C.A.* 47, 11094A. — S. presents the following table on the upper limits of temps. (for normal pressures; for higher pressures the temps. would be lower) at which the breakdown of the colloidally dispersed minerals takes place: halloysite 50°; hydrohalloysite 220°; hydrogoethite 350°; kaolinite 500°; metahalloysite 500°; α-kerolite 700°; montmorillonite 725°; sepiolite 800°; nontronite 850°; illite 950°. Following the presence of these minerals in metamorphosed rocks offers an opportunity to det. the temp. at which metamorphism takes place. In clays, halloysite present indicates a temp. of <50°; when metahalloysite is found, a temp. of <350°; kaolinite in argillite indicates a temp. of <500°. S. refutes the idea of anthracite being formed at 600° and higher. Kaolinite found in some anthracite assocn. indicates a temp. of 500°. S. suggests the possibility of making up a scale of temps. for the respective rock deposits by using x-ray and electron-microscope technique to det. the colloidally dispersed minerals. J. S. Joffe

SEDLITSKIY, I. D.

USSR

Mineralogy of the clay sediments of the Carboniferous of the Donets Basin. I. D. Sedlitskiy. *Voprosy Petrog. i Mineral. Akad. Nauk S.S.S.R.* 2, 123-34(1963).--The argillites of the Middle and Upper Carboniferous formations are dark-gray colored and rich in coal inclusions. Their mineralogical compn. was identified by combined x-ray diffraction and differential-thermal methods, further by optical and electron-microscopic exams. and bulk chem. analyses. The coal in these clay horizons is not graphitized; it is relatively easily oxidized by 88% H₂O₂ at room temp. in the fractions below 1 μ . The characteristic endothermic effect at 360° which coincides with that of the dehydration of goethite cannot be explained by the presence of this mineral which cannot be expected under the strongly reducing conditions of the clay sedimentation. The endothermic effects at 120, 350, and 910°. Indicate the presence of illite; the endothermic effect at 560° and the exothermic peak at

(over)

2
1/2

25

I. D. SEDLETSKII

3/2

800° indicate kaolinite. Siderite is identified by the endo-thermic effect at 890°, the exothermic peaks at 380°, 600°, 700° indicate the combustion of coal material. The x-ray analysis confirms the presence of much illite, little kaolinite, and subordinately finely dispersed quartz. The electron microscope shows further another clay mineral, perhaps nontronite. The chem. analyses indicate that the H₂O content of these illites is higher than in normal illite. Most of the illites show K₂O > Na₂O, also occasional CaO > K₂O (Grigor'ev, C.A. 43, 3318A). A typical Donets Basin illite shows $\gamma = 1.806$; $\alpha = 1.572$, in comparison with "normal" illite with $\gamma = 1.588$ to 1.610, and a higher birefringence (Belyankin, Zapiski Vsesoy. Mineralog. Obshchestva, 71, No. 1/2, (1942)). Monothermite with endothermic effects at 180 and 550° is observed only in one sample. The Chasov-Yar clays show in the electron microscope and the x-ray diagrams a complex mix of a mica-like mineral with kaolinite and quartz. The typical "monothermite" is distinguished from illite by its lower R₂O and RO, but higher H₂O contents. The first interference line ($d = 10.34 \text{ \AA}$) is different from that of illite ($d = 9.98 \text{ \AA}$). Also the optical constants are different, and S. considers monothermite to be an independent mineral. In the fractions below 1 μ the monothermite appears in the clays of Chasov-Yar associated with some montmorillonite. W. Bitel

OBRUCHEV, V.A., akademik; SEDLETSKIY, I.D., professor.

Colloidal minerals. Priroda 41 no.7:87-90 J1 '53.

(MLBA 6:6)
(Mineralogy)

SEDLITSKIY, I. D. and DZHUMAYLO, V. I.

"Colloidal-Dispersed Minerals of Clay Deposits of the Carboniferous in the Don Basin," Dokl. AN SSSR, 89, No.1, pp. 155-58, 1953. Rostov State U. in. Molotov.

States that carboniferous formations reflect mainly a compn of microdetrital and accessory minerals, but there are isolated indications ~~xxx~~ of mineral compns with only thinly dispersed agrillites and sillstones. Presented by Acad D.S. Belyankin.

259T47

SEPLETSKIY, I. D.

"Colloidal-Dispersed Minerals and the Origin of Loess in Rostov Oblast',"
Rostov State U. im. Molotov, Dokl. AN SSSR, 90, No.2, pp. 275-78, 1953

States that variegated composition of colloidal-dispersed minerals of Rostov Oblast' loess are satisfactorily explained from the positions held in the Aeolian theory of V. A. Obruchev. Presented by Acad V.A.Obruchev 7 Mar 53.

260T61