

Country	: Czechoslovakia	I
Category=	: High Molecular Chemistry	
Abstr. Jour.	:	48345
Author	: <u>Wichterle, O.; Zelinka, J.</u>	
Institut.	:	
Title	: Copolymerization of Different Vinylidene Halides	
Orig. Pub.	: Collect. czechosl. chem. commun., 1958, 23, No 9, 1806-1809	
Abstract	: See RZhKhim, 1958, No 17, 59749.	

Distr: 4E2c(j)

Chain transfer of polymer in radical polymerization. D. 2. JAT (NO) (MAY)
 Lfm and O. Wichterle (Tech. Univ., Prague). J. Polymer
 Sci. 29, 575-84 (1958). The soln. polymerization of Me
 acrylate in compds. related to a polymer chain with the no.
 av. degree of polymerization, $P_n = 1-3$ has been investi-
 gated. Model compds. used were Me isobutyrate, di-Me
 2,4-pentanedicarboxylate, and tri-Me 2,4,6-heptanetricar-
 boxylate to preserve the structural analogy with the polymer
 chain. Prepn. of model substances, and polymerization and
 mol. wt. detn. are outlined. Results show that the chain
 transfer const. decreases from $P_n = 1$ to $P_n = 2$, assuming that
 transfer is the same with the higher polymer as with trimer,

CZECHOSLOVAKIA / High Molecular Chemistry.

I

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18045

Author : Wichterle, O.; Kralicek, J.; Sebenda, J.

Inst : Not given

Title : Anionic Polymerization of Caprolactam 6. III. New Catalysts for Anionic Polymerization of Caprolactam 6

Orig Pub : Chem. listy, 1958, 52, No 4, 636-639

Abstract : The alkaline-catalytic polymerization of caprolactam 6 (I) is caused by any compound which may convert I into an anion of the -CO-N-type. These compounds may be
1) acid salts, which can be

CZECHOSLOVAKIA / High Molecular Chemistry

I

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18045

catalyst must dissolve in the molten I. The catalyst activity of compound of the first group does not depend upon alkalinity of the anion, formed in the decarboxylation process, but depends only on the rate of decarboxylation. For catalysts of the $R-CH_2-COOK$ type it increases in the order of $C_6H_5-COOR < CN$. Certain acids, the salts of which are easily decarboxylated, are not effective as catalysts. To these belong acid salts containing halogens, S, or the Na group (potassium ethylxantogenate, sodium dimethyl-

CZECHOSLOVAKIA / High Molecular Chemistry

I

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18045

The following data were obtained (yield of polycaprolactam in %, reaction time in minutes, temperature): cinnamic acid Na - 78.0, 100, 260°; sodium phenylacetate - 89.5, 130, 250°; potassium carbetoxyacetate - 88.7, 5, 260° or 91.9, 7, 220°; sodium malonate - 78.2, 45, 260°; potassium monomethyloxylate - 85.0, 5, 250°; potassium phenylcarbaminate - 86.0, 10, 250°; sodium salt of N-carboxycaprolactam - 89.5, 5, 250°; Na-salt of monoethylcarbonic acid - 84.9, 300, 163° or 67.0, 10, 220° or 91.3, 60, 220°; Na-salt monobutylcarbonic acid - 88.5, 5, 260°; KCN - 80.8, 50, 260°; KCNO - 74.5, 5, 250°; NaN₃ - 68.9, 150, ...

CZECHOSLOVAKIA / High Molecular Chemistry,

I

Abs Jour : Ref Zhur - Khimiya No 5, 1959, No. 18045
Cont'd

of approx. 1% in the molten I at 80 - 100°. Insoluble
are: Na-salt of monomethylcarbonic acid and Na-salt of
malonic acid. The solubility of salts of acid esters of
the carbonic acid increases with the increase of alkyl
chain. Parts I and II were covered by the Ref Zhur -
Khimiya, 1956, 54678, 65167. -- J. Plesek

Country	: Czechoslovakia	I
Category	: High Molecular Chemistry	
Abs. Jour	: Referat Zhur--Khim., No 11, 1959	41213
Author	: Wichterle, O., Kolinsky, M., and Marek, M.	
Institut.	: Not given	
Title	: Dependence of the Rate of Polymerization of Isobutylene on the Acidity of the Catalyst. II. Catalysis by the Binary Systems $\text{BF}_3\text{-H}_2\text{O}$ and $\text{H}_2\text{SO}_4\text{-H}_2\text{O}$.	
Orig Pub.	: Chem Listy, 52, No 6, 1049-1057 (1958)	
Abstract	: The authors have investigated the rate of polymerization of isobutylene, catalyzed by the strongly acid binary systems $\text{BF}_3\text{-H}_2\text{O}$ and $\text{H}_2\text{SO}_4\text{-H}_2\text{O}$ in the Hammett acidity function range $H_0 = 7-10$. The	

Country : Czechoslovakia
Category : High Molecular Chemistry
Abs. Jour : Referat Zhur--Zhiz., No 11, 1959
Author :
Institut. :
Title :
Orig. Pub. :
Abstract : The dependence between the logarithm of the rate constant and the acidity function is linear, which fact confirms the protonic mechanism postulated for the catalysis. The reaction depends very little on the temperature and the degree of

OTCH/8-52-31-8/70

brum in Alkaline Polymerization of 6-Caprolactam
telyt) so that a larger part of gaseous products
ape. In the polymerizations in the presence of
e catalysts were weighed with an accuracy of
in thin tubes and following the solution of the
the tube was placed in the ampoule and tube and
are immediately sealed. The degree of
tion of the degree of conversion. The degree of
in was determined by the Kjeldahl method in the
finely ground polymeric materials from the lower
the polymer plug.

tion of the Average Degree of Polymerization
rings of the polymers were extracted in a Soxhlet
a with water for 16 hours. After extraction the
is dried for 16 hours at 50°C and 10-15 mm. The
1 and dried polymer was weighed into 25 ml. vial
lasted amounts of about 0.1 g. trichloro (about
was added and dissolved with shaking (10-20 hrs).
solvent, the solution was equilibrated at 25°C
filled up to the mark with trichloro. Ubbelohde
ric measurement was carried out in the solution of the
in trichloro was filtered through a sintered
filter 6, into the Viscometer. The result was taken
ried out at 25 ± 0.002°C. The result was taken
average of five consecutive readings which did
fer more than 0.2% from each other. The internal
ty (η) of the solution was calculated from equa-
ment according to the Huggins extrapolation equation
id for trichloro by Rybníček (Ref 17):

$$[\eta] = \frac{1.34 \eta_{sp}}{c} + 1 - 1$$

0.67 · c

η_{sp} - η_{rel} - 1 and c is the concentration of the
r (g/100 ml. solution). This equation is well suited
is extent of the degree of polymerization encountered
se experiments. The average degree of polymerization
calculated from the internal viscosity according to
equation $P = 92(\eta) - 1.61$.

tion of 6-Caprolactam
ta: The course of caprolactam polymerization was
red at 160, 180, 200, 220, 240 and 260°C and with a
m ethyl carbonate concentration of 0.5 mol %. Further
yst concentrations of 0.3, 0.5 and 1.0 mol % were
at 240°C. In using sodium acetate as a catalyst
weight concentration was 0.3, 0.5 and 1.0 mol % and a temperature
0°C. All polymerizations had, from the standpoint of
e of conversion, polymerization character and as an example
course of polymerization are given (Figure 1).
and kinetic concentrations are given (Figure 1).
relationship between the logarithm of the period required
to establish equilibrium and temperature (Figure 3) and it
und that with phenylacetate the polymerization occurs
e of polymerization is temperature dependent. The final
initially slower than with ethylcarbonate. The final
re polymerization is temperature dependent. The final
re similar to the equilibrium conversion. The final
e region of the melting point there is no such sharp
ze (Figure 6) and further it (P) is a function of
%)^{-1/2} as with the polymerization with sodium
are 7). The degree of polymerization which is finally

CZECU/8-52-11-8/30
um in Alkaline Polymerization of 6-Ceprolactam
not be considered as the equilibrium one.
e period in which this degree of polymerization
d, transamidation reactions occur while the final
yats for side reactions. In this, the final
ymization differs from the actual equilibrium
ymization which may obtain in the polymer obtained
ymization with water. Polymer actually "dead"
ymization is therefore, it is correspondingly
possible to obtain with it a correspondingly
nion nor degree of polymerization by keeping
nely lower temperature than that at which it
sed (Table 1). The final conversion value
y be considered as the constant conversion value,
d when it attains constant conversion value,
ation is still occurring as is shown by the
e degree of polymerization on the amount of
is given (Figure 8). It is possible to
at the more the water approaches an equimolar
yst ratio, the longer the period necessary to
brium.

Absolute values for equilibrium conversion
hydrolytic polymerization and those obtained
a for alkaline polymerization of 6-ceprolactam
rectly compared, for these results are dependent
analytical method used. In both cases, the
conversion is exclusively a function of the
nd is concerned with the pure thermodynamic
etween cyclic and linear systems.
e of the conversion on temperature has a
acter in both cases of polymerization; of course,
cerated by the authors for the above
cted. It is more consonant with a marked gradient
if a gradual change of phase occurs during
at one equilibrium is valid for the
ortion and another for the amorphous fusion
time change of the degree of polymerization
dium shortly after the start of the reaction
is again - Gríehl (Ref 8) claims that, as
ion and Kralíček and Sebedná (Ref 18) found that
period of polymerization with sodium, the
an a constant degree of polymerization. This
as supported by the authors' observations.
das it is not possible to read off critically
period in which the final degree of poly-
attained. The "dead" polymer, obtained after
sibly shows traces of polymerization activity.
all of the degrees of polymerization to ac-
e, corresponding to the "dead" polymer, by
by the fact that active polymerization with
he increasing degree of polymerization with
ratio is caused and the other hand by a slower
of the catalytic reaction. The catalytic
ity of the catalytic reaction. The individual
obably depends on the basicity of the individual
bonds, not, of course, have anything in common
ity of the polymerization which is determined
ty of the initiating reaction (decomposition
catalytically more "active" bases achieve,
e conditions, a lower degree of polymerization.

CZTCH/V8-52-11-9/30

imum in Alkaline Polymerisation of 6-caprolactam
results, it is possible to conclude that the
water leads to a slowing down of alkaline
in the reaction is longer than without water.
n probably not only as a result of the fact
of a definite portion of catalyst but also
the effect of factors; in the molar
polymerization results. The changes in degree
are, of course, small because the degree
is, in this case, basically determined
of added water, which as a result of spontane-
produces irreversible end groups into the
recovered but the consequence of this polymeriza-
n is altered. Polymerization occurs and this
the excess of water. Water is utilised in
ation of the lactam which proceeds until the
to catalyst reaches the ratio of 1:1.

figures, 2 tables and 21 references, 9 of
tech., 1 Soviet and 2 Polish, 1 Japanese,
1 English.

figures 2 tables and 21 references, 9 of them in English.
 of vysokomolekulárníh látek, Vaskoslovenská chemická a technická literatúra, Bratislava, 1964, 104 pages, 10 illustrations, 1 table, 10 references, 2 tables and 21 references, 9 of them in English.
 of vysokomolekulárníh látek, Vaskoslovenská chemická a technická literatúra, Bratislava, 1964, 104 pages, 10 illustrations, 1 table, 10 references, 2 tables and 21 references, 9 of them in English.

Distr: 4E2o(j)

✓ Isolation of carbonyl compounds. Otto Wichterle and Jih Černý. Czech. 92,298, Oct. 15, 1959. A method is described based on the adsorption of CO compds. by shaking the soln. with finely granulated polymers having functional groups derived from NH_2OH , N_2H_4 , and $\text{H}_2\text{NCSNHNH}_2$, and subsequently recovering with 6N HCl. The polymers are obtained by treating chloromethylated copolymers of styrene-divinylbenzene with the above compds. or their derivs.

L. J. Urbánek

4
1-29(NB)
1

COUNTRY : CZECHOSLOVAKIA
CATEGORY :
ABS. JOUR. : RZKhim., No. 1959, No. 86651
AUTHOR : Wichterle, O.; Gregor, V.
INST. :
TITLE : Addition of Dienes to Geminal Cyano-Nitroso
Compounds.
ORIG. PUB. : Collect. Czechosl. Chem. Commun., 1959, 24,
No 4, 1158-1169
ABSTRACT : See RZKhim, 1958, No 8, 25211.

7 7
✓ Grafting polycaprolactam on a polymethacrylate-type backbone. O. Wichterle and V. Gregor (Tech. Univ., Prague). *J. Polymer Sci.* 34, 309-17 (1959).—*N*-Methacryloyl- ϵ -caprolactam was prepd. by treating methacryloyl chloride with ϵ -caprolactam. This compd. could not be polymerized alone. However, copolymers with styrene up to a max. molar ratio of 0.4:0.6 were prepd. easily. Polymer imides prepd. this way catalyze the polymerization of caprolactam. The resultant grafted copolymers have a characteristic 3-dimensional structure with a formation of insoluble gels. The rates of grafting and cross-linking

6
2-May
1

WICHTERLE, O.

Distr: 4E2c(j)
The effect of alcohols on the anionic polymerization of ϵ -caprolactam. P. Češlín, B. Šittler, and O. Wichterle (Vysoká škola chem.-technol., Prague). *Collection Czechoslov. Chem. Commun.* 24, 3287-90 (1959).—In the presence of volatile alcs., the alk. polymerization of the

5
1-9-9 (HA)
1

WICHTERLE, O.

Distr: 432c(j)
/Caprolactam polymerization. O. Wichterle (Czech.
Akad. Sci., Prague). *Makromol. Chem.* 35, 174-82 (1960).—
Imide groups formed by disproportionating transamidation

2. pag (in.)

WICHTERIE, O.

I BOOK EXPLOITATION 30V/1934

on macromolecular chemistry. Moscow,

ium po makromolekularny khimii SSSR.
1960 8: doklady i svotreferaty.
terventioni Symposium on Macromolecular
Moscow, June 14-18, 1960; Papers and
III, [Moscow, Izd-vo AN SSSR, 1960]
les printed.

Uma.

The International Union of Pure and Applied
sion on Macromolecular Chemistry.

is intended for chemists interested in poly-
ms and the synthesis of high molecular

section III of a multivolume work contain-
macromolecular chemistry. The articles in
the kinetics of polymerization reactions,
special-purpose polymers, e.g., ion ex-
conductor materials, etc., methods of cat-
tion reactions, properties and chemical
igh molecular materials, and the effects of
a polymerization and the degradation of
spounds. No personalities are mentioned.
follow the articles.

Pravdnikov, and S. S. Medvedev
f Formic Acid and Formates on the
bons and Hydrocarbon Polymers 364

M. Yannyakiv (USSR). Study of the
c and Organoelemental Compounds on
of Polyvinyl Chloride 372

Blar, and P. Šefelin (Czechoslovakia).
-Caprolactam as a Result of Ex-
an Amide Bonds 380

Vá, and M. Zelinka (Czechoslovakia).
tial Catalyst in Polydimethylsiloxane;
triazation on the Thermal Stability of 388

K, and J. Stísel (Czechoslovakia).
radation of Polymers. Study of De-
or Different Types of Linear Polyesters 405

Korunkova, L. I. Golubenkova, A. S.
antovskaya, and M. S. Kostin (USSR). On
tabilization of Some Polymeric Materials 414

S. Kurimaki (USSR). Investigation
inhibitors of Rubber Oxidation at Vari- 422

and Ying Yen-K'ang (USSR). Mechanism of
i of Benzene Rings During the Radio- 433

L. A. Andrianov (USSR). On the Hydro-
[Ge Groups in Polymers With Inorganic 440 25

L. Penkaya, and O. I. Volkova (USSR).
Amorizations and Block Copolymeriza-
ring of Starch Solutions 334

I. Avbedzhayev, and U. Arizov (USSR).
Properties of Cellulose by Grafting 344 33

WICHTERLE, O.

PART I BOOK REVIEWS 807/1983

macromolecular chemistry. Moscow, 1960.

makromolekularny khimi, SSSR, Moskva, 19-18 knuzh
kemi, SSSR, Moskva, 19-18 knuzh (International Symposium on
held in Moscow, June 18-19; Papers and Summaries)
6-vo AN SSSR, 1960] 559 p. 5,500 copies printed.

national Union of Pure and Applied Chemistry, Com-
r Chemistry

ended for chemists interested in polymerization re-
s of high-molecular compounds.

II of a multivolume work containing papers on macro-
molecules in this volume treat mainly the kinetics of
reactions initiated by different catalysts or induced
research techniques discussed are electron paramagnetic
and light-scattering interpolation. There are summa-
ries and Russian. No personalities are mentioned. Refer-

34 (Rumania). On the Mechanism of the
Cyclopentadiene

ungary). On the Kinetics of a Reaction on

4. I. Trekmal (Czechoslovakia). Kinetics of

ethylene on a Heterogeneous Catalyst

Heterogeneous Catalysts for the Polymerization

390

Nilis, and O. Hamik (Czechoslovakia). The

time on the Polymerization of Propylene.

banion Trichloride-Triethylaluminum

study of the factors leading to the degradation

the ionic polymerization of dienes

396

Pe-sung, and A. P. Karavanko (USSR). Study of the

tion compounds with salts of heavy metals and the

compounds and their complexes to stimulate

395

valence on the kinetics of the polymerization of

396

Libby, I. Ya. Podinshny, and Shih Kuang-i

study of the mechanism of polymerization under

397

Lib, I. Ya. Podinshny, and M. G. Zhurav (USSR).

Optical Properties of Polymers

398

Libby, and O. B. Polizov (USSR). The

and Methods of Study

Lib, I. Ya. Podinshny, and I. P. Kabanov (USSR).

Polymerization Mechanisms Under the Effects

399

Libby (USSR). Polymerization Processes in

400

Libby (Czechoslovakia). Kinetics of the

401

DREIFUS, M.; WICHTERLE, O.; LIM, D.

Intra-Cameral lenses made of hydrocolloidal acrylates. Cesk. ofth.
16 no.2:154-158 Mr '60

1. II. oční klinika KU v Praze, přednosta akademik Kurz, CSAV Ústav
makromolekulární chemie, reditel akademik Wichterle.

(LENSES)

(ACRYLIC RESINS)

VIKHTERLE [Wichterle], O.; EKSNER [Exner], O.

Problem of the synthesis of polypeptides by means of reaction of amides with alcoholates. Coll Cz Chem 25 no.5:1371-1376 My '60.

1. Institut makromolekulyarnoy khimii, Chekhoslovatskaya Akademiya nauk, Praga.

GEFELIN, P.; CHMELIR, M.; WICHTERLE, O.

Crystallization of poly-6-caprolactam. Coll Cz Chem 25 no.5:
1267-1274 My '60.

1. Institut für makromolekulare Chemie, Tschechoslowakische
Akademie der Wissenschaften, Prag und Institut für Plaste,
Technische Hochschule für Chemie, Prag.

36769

S/081/62/000/001/067/067

B119/B101

15,8080

AUTHORS: Čefelin, P., Šittler, E., Wichterle, O.

TITLE: Production of mixed polyamides from amidines

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 574, abstract
1R52 (Collect. Czechosl. Chem. Commun., v. 25, no. 10, 1960,
2522 - 2529)

TEXT: Polyamides from three components of regular structure were obtained
by heating (in N₂ atmosphere) equimolar amounts of the following diamidines
and dicarboxylic acids: N,N'-di-[2'-(1'-azacycloheptenyl)]-ethylene
(III).

35

S/081/62/000/001/067/067
B119/B101

Production of mixed ...

40

other polyamides (except those with IV) form brittle fibers. Model reactions were conducted with monoamidines and monocarboxylic acids. When heating equimolar amounts of 2-methyl-amino-azacycloheptene and butyric acid with slowly increasing temperature (from 150 to 200°C during 1.5 hr in N₂ atmosphere), a product was obtained with a melting point of 177 - 178°C at 20 mm Hg, whose composition was similar to that of 6-butyramino-N-methyl caproamide. The reaction of equimolar amounts of 2-phenyl-azacycloheptene and benzoic acid (220°C, 3 hr, in N₂ atmosphere) yielded a product whose structure corresponded to that of 6-benzoylamino-N-phenyl caproamide: prisms with melting point 162 - 163°C (from a benzene-benzene

45

50

DREIFUS, M.; HERBEN, T.; LIM, D.; WICHTERLE, O.

Tolerance of orbital implants made of hydrocolloid acrylate.
Sborn. lek. 62 no.7-8:212-218 J1 '60

1. II. oční klinika fakulty všeobecného lékařství University
Karlovy v Praze, přednosta akademik Jaromír Kurz; Vysoká škola
chemicko-technologická v Praze, akademik Otto Wichterle a dr.
inz. D. Lim Vyvojové a výzkumné středisko n.p. Dental, inz.
Tomas Herben.

(EYE ARTIFICIAL)

(ACRYLIC RESINS)

23570

15.8107

Z/009/61/000/007/004/004
E112/E135

AUTHORS: Králíček, Jaroslav; Šebenda, Jan; Zadák, Zdeněk; and
Wichterle, Oto

TITLE: Alkaline polymerisation of ϵ -caprolactam. V.
Alkaline polymerisation of ϵ -caprolactam for the
production of large molded objects from high-molecular
poly-6-capramides

PERIODICAL: Chemický průmysl, 1961, No.7, pp. 377-381

TEXT: Caprolactam polymerises in presence of the usual
proton-donating catalysts at temperatures above the melting point
of the polymer. Internal stresses may therefore develop in

23570

Z/009/61/000/007/004/004
E112/E135

Alkaline polymerisation of ϵ -

polymerisation rate to such an extent that it proceeds already at temperatures well below the melting point of the polyamide. Polymerisation can therefore lead to a polymer in the solid state, and difficulties arising out of changes of density during crystallisation (internal stresses) can be mitigated, if not entirely eliminated. During polymerisation of ϵ -caprolactam, 28 cal/g are liberated, corresponding to a temperature increase of 50 °C in an adiabatically conducted process. Thus, in order not to exceed the melting point of the resulting polyamide, polymerisation should be initiated below 160 °C, as otherwise a polymerisation process presently described leads

23570

Z/009/61/000/007/004/004

E112/E135

Alkaline polymerisation of ϵ -

1) a commercial product of Czechoslovak origin, purified and freed of moisture by distilling off in vacuo 10% of the original charge (the distillation residue was found of sufficient purity for further experiments); 2) caprolactam crystallised from water; 3) caprolactam crystallised from benzene. N-acetyl- ϵ -caprolactam was prepared according to the method of R.E. Benson and T.L. Cairns (J. Am. Chem. Soc., 70, 2115 (1948)). Sodium salt of caprolactam was obtained by adding, in an inert atmosphere and protected from moisture, a solution of sodium methylate in anhydrous methyl alcohol to ϵ -caprolactam. Polymerisation experiments were undertaken with solutions of the sodium salt of caprolactam. Experimental details are as

23570

Z/009/61/000/007/004/004

E112/E135

Alkaline polymerisation of ϵ -

switched off as soon as the temperature of the reaction mixture rose by 50 °C. Results: best products were obtained with caprolactam crystallised from water, but properties of polymer from technical caprolactam were of sufficient standard to warrant exclusive use in further trials. The effect of the initial polymerisation temperature on polymerisation rate was studied and results are summarised by graphs. Equilibrium is reached after 10-35 min, and rate of polymerisation increases with increase of temperature. Graphs are given for the polymerisation of caprolactam with 0.3 mole % sodium-caprolactam + 0.3 mole % N-acetyl-caprolactam. Rate of reaction was very strongly affected by the

23570

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E112/E135

Alkaline polymerisation of ϵ -

centre and peripheral parts of the block showed almost identical degrees of polymerisation and contents of monomer. Removal of the polymer from the mold did not present difficulties (owing to contraction, after cooling, by about 2-3%). Experimental blocks of diameters over 20 cm and weighing 9 kg were prepared, also bearings and cogwheels. The new method is protected by a number of Czechoslovak patents.

There are 8 figures, 3 tables and 12 references: 7 Czech, (including citation of patents) 1 Russian, 1 German, 1 Dutch (patent) and 2 English, which read as follows:

Ref.7: A.B. Meggy, J.Chem.Soc., 796 (1953).

J. Am. Chem. Soc., 70, 2115 (1948).

WICHTERLE, O.; LIM, D.; DREIFUS, M.

On the problem of contact lenses. Cesk.ofth.17 no.1:70-75
Ja '61.

1. II. oční klinika KU v Praze, přednosta akademik J. Kurz
CSAV, Ústav makromolekulární chemie, ředitel akademik Wichterle.
(CONTACT LENSES)

WICHTERLE, O.; STEPEK, J.; BRAJKO, V.

Laboratory method of obtaining vinyl esters in splitting acetals
under reduced pressure. Coll Cz Chem 26 no.4:1099-1104 Ap '61.

1. Institut fur Plaste, Technische Hochschule fur Chemie, Prag.

(Vinyl alcohol) (Acetal)

WICHTERLE, O.

SURNAME, Given Names

(1)

Country: Czechoslovakia

Academic Degrees: [not given]

Affiliation:

Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences (Institut fuer makromolekulare Chemie, Tschechoslowakische Akademie der Wissenschaften), Prague

Source:

Prague, Collection of Czechoslovak Chemical Communications, Vol 26, No 11, November 1961, pp 2897-2908

Data:

"Degradation of Poly-6-Caprolactam by Reamidation."

Authors:

SORM, Frantisek, akademik; MASTOVSKY, Otakar; KASPAR, Jan; SIRACKY, Andrej;
VANA, Josef; ZACHOVAL, Ladislav; RASKA, Karel; BLASKOVIC, Dionyz,
akademik; WICHTERLE, Otto, akademik; PRANTL, Ferdinand; CUTA, Frantisek;
JERIE, Jan; HENNER, Kamil, akademik; CAPEK, Ladislav; LINK, Frantisek;
STRNAD, Julius

Report on the activities of the Czechoslovak Academy of Sciences made
at its 12th General Assembly, and the discussion. Věstník CSAV 70 no.1:
26-34 '61.

1. Namestek presidenta Ceskoslovenska akademie ved (for Sorm).
2. Clen korespondent Ceskoslovenske akademie ved (for Mastovsky,
Kaspar, Siracky, Vana, Zachoval, Raska, Prantl, Cuta, Jerie,
Capek, Link and Strnad). 3. Predseda Slovenskej akademie vied
(for Siracky).

WICHTERLE, Otto, akademik

Academician Rudolf Lukes; obituary. Vestnik CSAV 70 no.1:109-111 '61.

SEBENDA, Jan; CEFELIN, Pavel; WICHTERLE, Oto

Alkaline polymerization of 6-caprolactam. Part 7: Heat stability of the system-6-caprolactam; sodium salt of 6-caprolactam. Chem prum 12 no.1:41-45 Ja '62.

1. Ustav mikromolekulární chemie, Československá akademie věd, Praha.

DREIFUS, M.; HOLECKOVA, E.; WICHTERLE, O.

Evaluation of hydrocolloid plastic substances in tissue cultures. Cesk. oftal. 18 no.4:268-271 J1 '62.

1. II oční klinika fakulty všeobecného lékařství KU v Praze, přednosta akademik J. Kurz - Fyziologický ústav Československé akademie věd, reditel doc. dr. O. Poupa - Ústav makromolekulární chemie CSAV, reditel akademik O. Wichterle.

(PLASTICS) (TISSUE CULTURE)

SCHNEIDER, B.; SCHMIDT, P.; WICHTERLE, O.

On the structure and properties of polyamides. Part 1: Infrared spectra of polycaprolactam. Coll Cz Chem 27 no.8:1749-1759 Ag '62.

1. Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences, Prague.

43763

S/081/62/000/023/101/120
B101/B186

11.9700
AUTHORS:

Marek, Miroslav, Trekoval, Jiri, Wichterle, Oto

TITLE:

Method of polymerizing isobutylene

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 23, 1962, 708, abstract
23P300 (Czechosl. pat. 100471, August 15, 1961)

TEXT: Isobutylene (I) is polymerized in the presence of insoluble catalysts obtained by reaction of BF_3 and TiCl_4 with hydroxy and alkoxy compounds of Mg and Al. This is done without using solvents. Polymers with a molecular weight of 20,000 - 150,000, usable as oil additives, are obtained. The reaction is controlled by the catalyst quantity. The reaction temperature

Method of polymerizing...

S/081/62/000/023/101/120
B101/B186

the conversion is 90% after 3 hrs, the molecular weight being 600,000.
Partially hydrolyzed aluminum sec-butyrate, $\text{Al}(\text{OH})_2\text{F}$, $\text{Mg}(\text{OH})_2$, $\text{Al}(\text{OC}_3\text{H}_7)_2\text{Cl}$
and, instead of TiCl_4 , SnCl_4 were also used for producing the catalyst.
[Abstracter's note: Complete translation.]

KOZESNIK, Jaroslav, akademik; BLASKOVIC, Dionyz, akademik; KOLMAN, Arnost, akademik; MACURA, Jiri, dr.; VANA, Josef; GOSIOROVSKY, Milos; BOHEJ, Jaroslav, akademik; PROCHAZKA, Jaroslav, prof., dr.; HAMPEJS, Zdenek, dr.; BRABEC, Frantisek, prof, inz., dr.; SORM, Frantisek, akademik; NOVAK, Josef, akademik; NEUMANN, Jaromir, doc., dr.; BAZANT, Vladimir, inz., dr.; KOUNOVSKY, Bohumil, dr.; SZANTO, Jan, dr.; ROZSIVAL, Miroslav, dr.; KASPAR, Jan, dr.; HANKA, Ladislav, prof., inz.; STRNAD, Julius; WICHTERLE, Otto, akademik; ZATOPEK, Alois; JAVORNICKY, Jan, inz.; VAVRA, Jaroslav, dr.; BLATTNY, Ctibor, akademik; ONDRIS, Karol, dr.; KUKAL, Vaclav, inz.

The 22d Congress of the Communist Party of the Soviet Union and the tasks of Czechoslovak science; discussion. Vestnik CSAV 71 no.1:3-59 '62.

1. Hlavní vedecký sekretar Československé akademie ved (for Kozesnik).
2. Člen korespondent Československé akademie ved (for Vana, Gosiorovsky, Kaspar, Strnad, Zatopek). 3. Ředitel Vědecké sekce (for Kozesnik).

WICHTERLE O.; TOMKA, J.; SEBENDA, J.

Alkali polymerization of 6-caprolactams. Pt.9. Coll Cz Chem 28
no.3:696-708 Mr '63.

1. Institut für makromolekulare Chemie, Tschechoslowakische
Akademie der Wissenschaften, Prag.

WICHTERLE, Oto, akademik

Commemorating the 50th birthday of Academician Frantisek Sorm.
Chem listy 57 no.2:184-185 F '63.

WICHTERLE, Otto, akademik; HNIDEK, inz.; LIM, dr.; SEDLACEK, inz., ScC.;
LAZAR, inz., ScC.

Research on artificial macromolecular substance and systems.
Vestnik CSAV 72 no.2:189-195 '63.

DREIFUS, M.; WICHTERLE, O.

Clinical experiences with hydrogel contact lenses. Cesk. oftal.
20 no.5:393-399 S '64.

1. II očni klinika fakulty vseobecneho lekarstvi Karlovy University
v Praze (prednosta akademik J. Kurz) a ustav makromolekularni chemie
Ceskoslovenske akademie ved (reditel akademik O. Wichterle).

SEVOIA, S.; WICHTERLE, O.; PESKA, J.

Chemical transition of polymers. Pt.1. Coll. Cz. Chem. 39 no.2:
464-477 F '64.

1. Institute of Macromolecular Chemistry, Czechoslovak Academy
of Sciences, Prague.

WICHTERLE, C.; TOMKA, J.; SEBENDA, J.

Alkaline polymerization of 6-caprolactam. Pt. 12. Coll Cz
Chem 29 no. 3:610-624 Mr '64.

1. Institute of Macromolecular Chemistry, Czechoslovak Academy
of Sciences, Prague.

STEHLICEK, J.; SEBENDA, J.; WICHTERLE, O.

Alkaline polymerization of 6-caprolactam. Pt.17. Coll Cz Chem 29
no.5:1236-1258 My '64.

1. Institute of Macromolecular Chemistry, Czechoslovak Academy
of Sciences, Prague.

WICHTERSE, O., akademik

International Symposium of Macromolecular Chemistry of the
International Union of Pure and Applied Chemistry 1965. Chem
prum 14 no.7:385 J1 '64.

1. Chairman of the Organization Committee of the Symposium.

WICHTERLE, O.

CZECHOSLOVAKIA

PESKA, J; BENES, M.J; WICHTERLE, O.

Institute of Macromolecular Chemistry, Czechoslovak Academy
of Sciences, Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications,
No 1. January 1966. pp 243-251

L 29943-66 EWP(j)/T IJP(c) RM
ACC NR: AP6006154 (A) SOURCE CODE: CZ/0078/65/000/010/0017/0017 40
AUTHOR: Wichterle, Oto (academician) (Prague); Trekval, J. (Engineer) (prague) B
ORG: None
TITLE: (Method of producing high abrasion resistance organic glass) C2 Pat. no. PV 15
5206-64 15
SOURCE: Vynalezky, no. 10, 1965, 17
TOPIC TAGS: organic glass, polymer, oligomer, polymerization, catalysis
ABSTRACT: A method is proposed for producing high abrasion resistance organic glass by the two stage polymerization of allyl or methallyl esters α , of β -saturated carbonic acid esters. In the first stage anion polymerization catalysts are used, In the first

WICHTERLOVA, B.

CZECHOSLOVAKIA

JIRU, P.; TICHY, J.; WICHTERLOVA, B.

Institute for Physical Chemistry, (Institut für physikalische Chemie),
Czechoslovak Academy of Sciences, Prague (for #1)

Prague, Collection of Czechoslovak Chemical Communications, No 2, Feb
1966, pp 674-688

L 29646-66 RM

ACC NR: AP6020147

SOURCE CODE: CZ/0008/65/059/012/1451/1455

AUTHOR: Wichterlova, Blanka; Jiru, Pavel

ORG: Institute of Physical Chemistry, CSAV, Prague (Ustav fysikalni chemie CSAV)

TITLE: Pulse method for the investigation of the velocity of heterogenous solid phase. Gas: reaction combined with a gas-chromatographic analysis of gas reaction product.

SOURCE: Chemické listy, v. 59, no. 12, 1965, 1451-1455

TOPIC TAGS: gas chromatography, chemical kinetics

ABSTRACT: The authors designed an apparatus which facilitates the study of reaction kinetics of gases passing through a layer of a solid reactant. When the reaction rate is too fast to allow a study with a continuous gas stream it is an advantage to introduce the gas in several interrupted doses. The apparatus is de-

WICHTERLOVA, Blanka; JIRU, Pavel

Kinetics of catalytic oxidation of methanol to formaldehyde on a Fe_2O_3 - MoO_3 catalyst. Chem prum 15 no.4:198-202 Ap '65.

1. Institute of Physical Chemistry of the Czechoslovak Academy of Sciences, Prague.

WICHURA, K.

Infrared rays in the food industry. Tr. from the German. p. 188.
(PRUMYSL POTRAVIN, Vol. 7, No. 4, 1956, Praha, Czechoslovakia)

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

WICHURA, K.

New method of pasteurizing beverages. p. 325. PRUMYSL POTRAVIN.
(Ministerstvo potravinarskeho prumyslu) Praha. Vol. 7, no. 7, 1956.

SOURCE: East European Accessions List, (EEAL), Library of Congress
Vol. 5, no. 12, December 1956.

WICIK, Karól, inz.; ORNACKI, Jan, inz.

A new technology of liquid-concrete stowing in the Orzel Bialy mine.
Rudy i metale 6 no.6:252-258 Je '61.

WICINSKI, Ryszard

Method for the quantitative determination of uterine activity in labor.
Magy. noorv. lap. 21 no.1:1-8 Feb 58.

1. A Bialystoki Orvostudományi Akadémia szülészeti klinikájának
közleménye (Igazgató: Stefan Soszka dr., egyetemi tanár)
(LABOR, physiol.

uterine contractions, quantitative measurement by Lenard's
tocograph (Hun))

HOJDEK, Irena; WICINSKI, Ryszard

The utility of the partogram in the observation of parturition.
Gin.polska 31 no.4:419-431 J1-Ag '60.

1. Z Kliniki Położnictwa i Chorob Kobiecth A.M. w Białymstoku
Kierownik: prof. dr med. S.Soska.
(LABOR physiol.)

JASKIEWICZ, Janina; WICINSKI, Ryszard

Contraction function of the uterus in parturition and hemorrhages
of the 3rd period. Gin.polska 31 no.4:441-449 J1-Ag '60.

1. Z Kliniki Położnictwa i Chorob Kobiectych A.M. w Białymstoku
Kierownik: prof. dr med. S.Soska
(LABOR physiol.)
(HEMORRHAGE, POSTPARTUM etiol.)

MICHALAK, Wladyslaw; WICINSKI, Ryszard

Further observations and results of inducing labor. Gin.polska
31 no.4:463-468 J1-Ag '60.

1. Z Kliniki Położnictwa i Chorob Kobietych A.M. w Białymstoku
Kierownik: prof. dr med. S.Soska
(LABOR, INDUCED)

MUSIATOWICZ, Jozef; WICINSKI, Ryszard

A parturition observation card (method of graphical presentation of phenomena occurring during parturition). Gin.polska 31 no.4: 475-481 J1-Ag '60.

1. Z Kliniki Położnictwa i Chorob Kobietych A.M. w Białymstoku
Kierownik: prof. dr med. S.Soska.
(LABOR physiol.)

SERWATKO, W.; WICINSKI, R.

Behavior of blood serum cholinesterase in the 10th month of pregnancy, in parturition and the puerperium. Gin. polska 31 no. 4: 483-486 J1-Ag '60.

1. Z Kliniki Poloznictwa i Chorob Kobietych A.M. w Bialymstoku
Kierownik: prof. dr med. S. Soszka
(CHOLINESTERASE blood)
(PREGNANCY blood)
(LABOR blood)
(PUERPERIUM blood)

SOSZKA, Stefan; WICINSKI, Ryszard

Diagnosis of incoordinated contraction function of the uterus
in parturition. Gin.polska 31 no.4:515-521 J1-Ag '60.

1. Z Kliniki Położnictwa i Chorob Kobietych A.M. w Białymstoku
Kierownik: prof. dr med. S.Soska.
(LABOR compl.)

ZASZTOWT, Otton; WICINSKI, Ryszard

Contraction function of the uterus in parturitions of elderly primiparas. Gin.polska 31 no.4:523-531 J1-Ag '60.

1. Z Kliniki Położnictwa i Chorob Kobietych A.M. w Białymstoku
Kierownik: prof. dr med. S.Soska.
(LABOR compl.)

ROGALEWSKI, Roman; WICINSKI, Ryszard

Differential constant current amplifier for electrophysiological purposes.
Acta physiol. polon. 13 no.3:437-439 '62.

1. Z Kliniki Położnictwa i Chorob Kobięcych AM w Białymstoku Kierownik:
prof. dr St. Sołtka.
(ELECTROPHYSIOLOGY equip & supply)

WIGINSKI, R.

Principles of the intracellular registration of bioelectrical phenomena in smooth muscles. Acta physiol. polon. 13 no.5:663-670 '62.

1. Z Kliniki Położnictwa i Chorob Kobięcych AM w Białymstoku Kierownik:
prof. dr St. Soszka.

(MUSCLE, SMOOTH) (ELECTROPHYSIOLOGY)

WICINSKI, Ryszard

Electrobiological phenomena in the myometrium of the white
rat and guinea pig in estrus. Ginek. pol. 34 no.2:199-204
'63.

1. Z Kliniki Położnictwa i Chorob Kobietych AM w Białymstoku
Kierownik: prof. dr med. S. Soszka.
(ESTRUS) (UTERUS) (ELECTROPHYSIOLOGY)
(DIETHYLSTILBESTROL) (PHARMACOLOGY)

WICKERT, G.

V.2466. HYDRO-ELECTRIC PLANTS FOR UTILIZATION OF SOLAR RADIATION.
Wickert, G. (Prakt. Energielek., 1955, vol. 3, (2), 180-192). Types of hydro-
electric plant are discussed which utilize a proportion of the sun's potential
energy either by a large temperature drop between deep and top water layers or

GP
FU

WICKL, H.

TECHNOLOGY

periodicals: KOZARSTVI Vol. 8, no.7, July 1958

WICKL, H. Production of suede leather. Tr. from the German. p.215.

WICZYK, Stanislaw

Rheumatic diseases in deep-sea fishermen. Bull. State Inst. Marine
Trop. M. Gdansk Vol.5:270-281 1953.

1. Z Panstwowego Instytutu Medycyny Morskiej i Tropikalnej w
Gdansk i Centralnej Wojewodskiej Poradni Przewodniaczej.

(OCCUPATIONAL DISEASES,

*rheum. in fishermen)

(RHEUMATISM,

*in fishermen)

WICZYK, S.

Excerpta Medica Sec. 6 Internal Medicine Vol. 9/5 May 55

3341. WICZYK S. Państwowego Inst. med. Morskiej i Tropikalnej, Gdańsk. *Gość-
~~cie stawowy~~ wśród rybaków dalekomorskich. Rheumatoid arthritis
among deep sea fishermen POL. TYG. LEK. 1954, 9/33 (1044-1050)
Tables 7 (VI, 17*)

Wiczak, S.

BLAWAT, F.; WICZYK, S.; ZACHARSKA, A.

Immunological reactions for brucellosis in arthritis deformans.
Bull. Inst. Marine Trop. M. Gdańsk 6:87-98 1955.

1. Z Państwowego Instytutu Medycyny Morskiej i Tropikalnej w
Gdańsku) i Wojewódzkiej Poradni Przeciwrzeumatycznej w Gdańsku).

(ARTHRITIS, RHEUMATOID, immunology,
immunol. reactions for brucellosis)

(BRUCELLOSIS, immunology,
immunol. reactions for brucellosis in rheum arthritis)

WICZYK, S.

Articular changes in young shipyard workers using compressed air instruments. Med.pracy 6 no.2:117-120 1955.

1. Instytut Medycyny Morkiej - Gdansk.

(OCCUPATIONAL DISEASES

joint dis. in young workers in shipyard using compressed air instruments)

(JOINTS, diseases

occup., in young shipyard workers using compressed air instruments)

HAJEL, Alojzy; WICZYK, Stanislaw; KOPECIOWA, Olga

Locomotor organ in divers and its relation to decompression sickness. Bull. Inst. Marine Trop. M. Gdansk 7:224-232 1956.

1. Z Panst. Inst. Med. Mors. i Trop. w Gdansku.
(JOINTS, in various diseases,
decompression sickness (Pol))
(DECOMPRESSION SICKNESS, pathology,
joints (Pol))

EXCERPTA MEDICA Sec.17 Vol.4/1 Public Health, etc. Jan58

WICZYK S.

216. WICZYK S. Odd. Hig. Pracy Inst. Med. Morskiej, Gdansk. Skargi gascowe wśród rybaków dalekomorskich. II *Incidence of rheumatic diseases among deep-sea fishermen.* II Med. Pracy 1957, 8/1 (47—55) Tables 10

In 1955 a group of 749 deep-sea fishermen was examined, by the staff of the Institute of Maritime Medicine. The author, who took part in these investigations, worked out the frequency of rheumatic diseases according to employment (deck group and engine room group), age, period of staying ashore and period of fishery job. The incidence of rheumatic diseases was found to be 37.5 %; this incidence was greater in the engine room group than in the deck group (42.2 : 34.6), it was greater among older fishermen, after a longer fishing job and a longer stay ashore. No relationship between potential foci of infection (tonsils, teeth) and rheumatic diseases was found. (VI, 17)

Wiczak, Stanislaw

WICZYK, Stanislaw

Joint changes in shipyard workers dealing with compressed air
apparatus. Bull. Inst. Marine M. Gdansk 8 no.1-2:151-156 1957.

1. Z Instytutu Medycyny Morskiej w Gdansk.

(JOINTS, pathol.

changes in shipyard workers handling compressed air
appar. (Pol))

(OCCUPATIONAL DISEASES
same)

WICZYK, Stanislaw; WOJDAT, Wacław; MATULEWICZ, Stanislaw

Docker's lumbar region of spine. Bull. Inst. Marine M. Gdansk 9 no.1-2:
65-75 1958.

1. (From the Institute of Marine Medicine in Gdansk and of the Radiology
Department of Medical Academy in Gdansk)

(BACKACHE,

analysis in dock workers & stevedores)

(SPINE, diseases

analysis of lumbar disord. in dock workers & stevedores)

WICZYKOWA, Barbara

Cytologic picture in cases of complicated pregnancy. Gin. polska
26 no.1:101-107 Jan-Mar 55.

1. Z Kliniki Położnictwa i Chorob Kobietych A.M. w Gdansk.

Kierownik: prof. dr J. Zubrzycki.

(VAGINAL SMEARS, in pregnancy,
diag. value)

(PREGNANCY, complications,
diag., vaginal smears)

WICZYKOWA, Barbara

Evaluation of functional disorders of the menstrual cycle in sterility. Gin. polska 27 no.3:391-395 May-June 56.

1. Z Kliniki Położnictwa i Chorob Kobięcych A.M. w Gdansk
Kierownik: prof. dr. J. Zubrzycki i doc. dr. S. Metler
Gdansk-Wrzeszcz, ul. Kochanowskiego 59. m. 1.

(STERILITY, FEMALE, diagnosis,
histol. & hysterosalpinographic methods in funct.
cases (Pol))

P/015/60/000/004/001/001
A076/A026

9.2110 (1043,1145,1153)

AUTHORS: Winogradów, Leon and Widał, Barbara

TITEL: Results From Studies on Ceramic Products for Condensers With a
Temperature Dielectric Penetrating Coefficient of $Tk_E = -150 \pm$
 $\pm 40 \cdot 10^{-6}/^{\circ}C$

PERIODICAL: Szkło i Ceramika, 1960, No. 4, pp. 108-114

TEXT: The article describes the dielectric penetrating properties and
temperature coefficients of ceramic products used in the manufacture of radio
condensers. Further, it describes a ceramic condenser recently developed in
Poland. Tests performed during its production aimed at consolidation of molar

85033

P/015/60/000/004/001/001
A076/A026

Results From Studies on Ceramic Products for Condensers With a Temperature Dielectric Penetrating Coefficient of $TkE = -150 \pm 40 \cdot 10^{-6}/^{\circ}C$

15
sing, the samples were sintered in an electric tunnel furnace. Electric properties were tested after silver electrodes had been pressed into the samples. The best properties were obtained by applying technical titanium dioxide bought from Japan and crude magnesite mined in the "Wiry" mine in Lower Silesia. The titanium dioxide had the following chemical compounds TiO_2 - 99.40 % and Fe_2O_3 - 0.06 %. Further, spectrum analysis showed traces of Al, Mg, Si and Na. The raw material was burnt in a round coal furnace at $1,250^{\circ}C$ in oxidizing atmosphere. Due to great difference in temperature in various parts of the furnace,

85633

P/015/60/000/004/001/001
A076/A026

Results From Studies on Ceramic Products for Condensers With a Temperature Dielectric Penetrating Coefficient of $T_{kg} = 150 \pm 40 \cdot 10^{-6}/^{\circ}C$

added to the mass did not decrease the sintering temperature. In order to obtain a high degree of disintegration, especially of sintered TiO_2 , the material was milled for long periods with the result that traces of SiO_2 were found, which originated from balls and lining of the mill. To check this, titanium dioxide was milled in a Soviet vibrating mill type M-200. Weight ratio between raw material and steel balls was 1 : 5. Vibrating frequency of the mill was about 3,000 cycles per minute with amplitude 2 mm. Milling time 0.5 hours. The plus mesh on a 10,000 mesh/cm² sieve was 6 to 7 %. Granulometric composition of TiO_2 was established by the Andreasen method. The TiO_2 mass was wet-milled . ✓

P/015/62/000/002/002/002
D001/D101

AUTHORS: Widaj, Józef; Szeliga, Józef; Zarukiewicz, Maciej

TITLE: Silver pastes used in the manufacture of radio ceramics

PERIODICAL: Szkło i ceramika, no. 2, 1962, 47-57

TEXT: An informative review is given of the composition, manufacture, and application of silver pastes used in coating radio ceramics with a layer of silver. A great number of usable constituents are listed and their effect on silver paste properties described within the scope of a cursory treatment. There are 11 figures and 4 tables.

P/015/62/000/003/001/001
D001/D101

AUTHORS: Winogradow, Leon; Widaj, Józef; Cieśla, Marian

TITLE: The effect of grain size and vibration grinding on the properties of resistor ceramics

PERIODICAL: Szkło i ceramika, ^{Vol. 13} no. 3, 1962, 83-87

TEXT: The article is the first part of a report serial on a test made by the Katedra Ceramiki Szlachetnej (Chair of High Grade Ceramics) of the Akademia Górniczo-Hutnicza (Mining and Metallurgical Academy) in Kraków under a research line which has continued since 1953 in cooperation with the radio ceramics indus-

try to assess the properties of ceramics ground in a vibrating

The effect of grain size ...

P/015/62/000/003/001/001
D001/D101

Avgustinik, and A.M. Ginstling. There are 2 figures.

P/015/62/000/004/001/001
D001/D101

AUTHORS: Winogradow, Leon; Widaj, Józef; Cieśła, Marian

TITLE: The influence of grain size and vibration grinding on the properties of resistor ceramics

PERIODICAL: Szkło i ceramika, no. 4, 1962, 112-118

TEXT: The article is the last part of a serial and describes tests and results. Ceramic samples were prepared from a composition of 25.7% Scandinavian feldspar, 25.0% indigenous quartz, 40% kaolin, 7.4% clay, and 1.9% barium carbonate. The raw material was processed in four different ways: 1) conventional method as used at the manufacturing plant; 2) both feldspar and quartz were

The influence of grain size ...

P/015/62/000/004/001/001
D001/D101

unit volume of grains was determined in a Blaine apparatus and expressed in units of $10^3 \text{cm}^2/\text{g}$. Test samples prepared from moistened powder mixtures were fired for 80 minutes at $1,250^\circ\text{C} \pm 20^\circ\text{C}$ and examined for dielectric properties such as susceptibility, breakdown strength, loss factor, and physical properties such as shrinkage, water absorption, etc. Conclusions: Grain size and grinding technology have a great bearing on the properties of ceramics. Preliminary grinding of feldspar and quartz is recommended for better properties and further advantages such as lower firing temperature, lower flux content (feldspar), reduction of wet-grinding time from 50 to 20 hours, $1,500 \text{cm}^2/\text{g}$ more surface area per unit volume, about 1% less shrinkage, 0.1% less water absorption, about $100 \text{kg}/\text{cm}^2$ more breaking strength, an increase in breakdown strength by 5 kV/mm and overall improvement in dielectric properties. There are 2 tables and 8 figures.

P/015/62/000/010/002/002
D001/D101

AUTHORS: Winogradow, Leon; Widaj, Józef; Szykuła, Paweł

TITLE: Paraffin wax as plasticizer in the production of capacitor dielectric based on barium titanate

PERIODICAL: Szkło i ceramika, no. 10, 1962, 303-314

TEXT: The Zakłady Ceramiki Radiowej (Radio Ceramics Plant) and the Katedra Ceramiki Szlachetnej Akademii Górniczo-Hutniczej (Chair of Ceramic Whiteware of the Metallurgical and Mining Academy) in Kraków examined the effect of paraffin wax plasticizer on the manufacture and properties of ca-

Paraffin wax as plasticizer in the ...

P/015/62/000/010/002/002
D001/D101

results were achieved with a paraffin content of 4%, with disks pressed at 1,500 kg/cm² and heated at 120°C for 1 hour. Disks thus prepared had a mechanical strength of 6 kg against the minimum required 2.5 kg. Mechanical strength was established by resting a 60° conical steel point with a tip of $r = 0.3$ on the samples and adding ballast until destruction. There are 9 tables and 17 figures. [Abstracter's note: The unit in $r = 0.3$ is not specified.] ✓

L 24327-65 EWT(l)/EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/EPA(w)-2/EEC(t)/EWP(t)/
EEC(t)-2/EWP(b)/EWA(h) Pab -10/Pt-10/Peb IJP(c) JD/GG/WB

ACCESSION NR: AP4045681

P/0015/64/000/009/0243/0246

AUTHOR: Widaj, Jozef, Sroka, Jozef

TITLE: Properties of barium titanate ceramics modified with bismuth stannate synthesized
from oxides ²⁷ ²⁷

SOURCE: Szklo i ceramika, no. 9, 1964, 243-246

TOPIC TAGS: barium titanate, bismuth stannate, titanium tin, ceramic electrical property ²¹

ABSTRACT: The authors studied changes in the electrical parameters of barium titanate ceramics, caused by the addition of bismuth stannate. The synthesis of the latter is described. Ceramic parts were prepared from BaTiO_3 and $\text{Bi}_2(\text{SnO}_3)_3$ sinters. The measured

their assistance Orig. art. has: 5 figures and 5 tables.

Card 1/4

L 24327-65

ACCESSION NR: AP4045681

ASSOCIATION: none

SUBMITTED: 00

ENCL: 02

SUB CODE: MT

NO REF SOV: 000

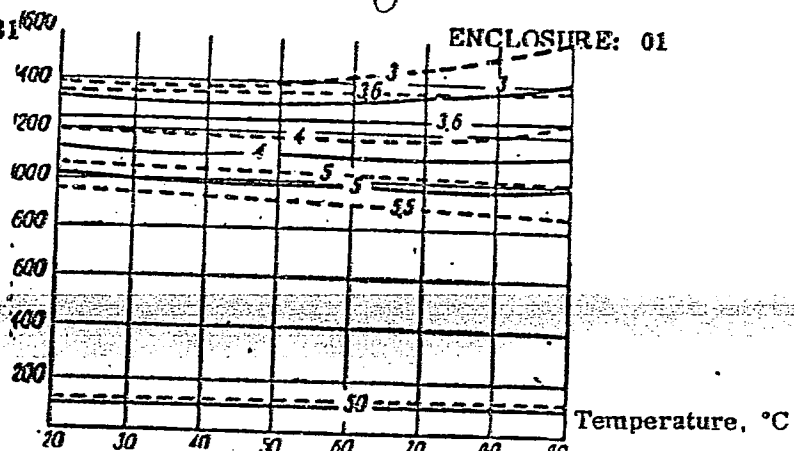
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L 24327-65

ACCESSION NR: AP4045681

ENCLOSURE: 01

Dielectric constant (E)



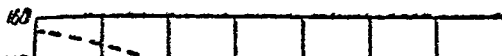
mol. % $\text{Bi}_2(\text{SnO}_3)_3$ in the materials.

Card 3/4

L 24327-65

ACCESSION NR: AP4045681

0
ENCLOSURE: 02



measurements made at a frequency of 1 KC and voltage of 2V/mm. Figures on graph
give mol. % $\text{Bi}_2(\text{SnO}_3)_{3/3}$ in the materials.

Card 4/4

J-20689-55 EWT(11)/EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/EPA(w)-2/EWP(b)/EWA(h)
Pab-10/Pt-10/Peb/Pa-4 ASD(a)-5/ASD(m)-3/AS(mp)-2 WH

ACCESSION NR: AP4049393

P/0015/64/000/011/0301/0307

AUTHOR: Winogradow, L., Widaj, J., Lutze-Birk, A.

TITLE: New trends in the development of high-capacity ceramic capacitors

L 20689-65

ACCESSION NR: AP4049393

ceramic dielectrics, and discuss in detail the reduction of BaTiO_3 and of titanate ceramics. On the basis of this survey, the authors come to some preliminary conclusions regarding the use of dielectrics with a redox layer and the effect of the addition of La_2O_3 to BaTiO_3 on the processes of reduction and re-oxidation. Orig. art. has: 15 figures, 2 tables, 1 formula and several chemical equations.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: IC, EC

NO REF SOV: 004

OTHER: 031

L 23098-65 EEC(h)-2/EPF(n)-2/EPA(s)-2/EPA(w)-2/EWA(h)/EWT(1)/EWT(n)/EEC(t)/
EWP(b)/EWP(e) Pt-10/Pu-4/Pab-10/Peb IJP(c) GG/WH
ACCESSION NR: AP5002230 P/0015/64/000/012/0328/0330

AUTHOR: Winogradow, L.; Widad, J.; Kwatera, A.; Lutze-Birk, A.

TITLE: Attempts at manufacturing dielectrics with redox layers

SOURCE: Szklo i ceramika, no. 12, 1964, 328-330

TOPIC TAGS: barium titanate, lanthanum oxide, ceramic material, dielectric material, capacitor dielectric material, redox, redox dielectric manufacture

ABSTRACT: This experimental work was carried out in the following sequence:
a) preparation of BaTiO_3 and $\text{BaTiO}_2 + \text{La}_2\text{O}_3$ samples; b) firing in the presence of air; c) determination of electric properties; d) reduction; e) surface mi

of air; c) determination of electric properties; d) reduction; e) surface oxidation; and f) determination of the properties of the dielectrics with the redox layers. The experimental results for the latter are given in Table 1 of the Enclosure. The experimental data lead to the following conclusions: 1) the manufacture of capacitors of high capacitance through the application of dielectrics with redox layers is possible and relatively simple; 2) optimum results are obtained with $\text{BaTiO}_3 + \text{La}_2\text{O}_3$, which are 99.5 and 0.5 per cent by weight, respectively; the mixture fired at 1380C must be subjected to lengthy reduction

Card 1/12

WIDAJ, Jozef

POLAND

SEKKA, Jozef; WIDAJ, Jozef

Radio Ceramics Plant (Zakłady Ceramiki Radiowej), (for both)

Warsaw, Przegląd elektroniki, No 12, December 1965, pp 602-608

L 51098-65 EWT(1)/EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPA(w)-2/EEC(t)/EWP(b)

Tab-10/Pt-7 P1-4 11P-6 00 WH

ACCESSION NO. 51098-65

AUTHOR: Widał, J.

TITLE: Effect of grinding and firing on dielectric properties (ϵ and $\tan \delta$) of barium titanate ceramics

SOURCE: Szkło i ceramika, no. 5, 1965, 138-141

TOPIC TAGS: ceramic, barium titanate, titanate ceramic, ferroelectric, grinding, firing, dielectric constant, dielectric loss tangent

ABSTRACT: This study of the effect of forming processes on the properties of ferroelectric ceramic bodies is restricted to those parameters of the process which cause a change in the dielectric properties of barium titanate ceramics. The dielectric constant (ϵ) and dielectric-loss values ($\tan \delta$) are considered as functions of the