

**SHUNGITE ROCKS OF KARELIA:
GEOLOGY, STRUCTURE,
INNOVATIVE MATERIALS AND TECHNOLOGIES**

29 June - 1 July 2021

Petrozavodsk

Conference with international participation

RUSSIAN ACADEMY OF SCIENCES

DEPARTMENT OF EARTH SCIENCES, RAS

KARELIAN RESEARCH CENTRE, RAS

INSTITUTE OF GEOLOGY, KARELIAN RESEARCH CENTRE, RAS

LLC «KARELIAN INVESTMENT COMPANY «RBK»

PROGRAM

Conference with international participation

«SHUNGITE ROCKS OF KARELIA:

**GEOLOGY, STRUCTURE, INNOVATIVE MATERIALS AND
TECHNOLOGIES**

«SHUNGITE 2020-2021»

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2021

June, 29

Conference Hall of Institute of Geology KRC RAS,

Room 422, Puskinskaya, 11, Petrozavodsk

and

on-line ZOOM

9.00-10.00 **Registration**

Conveners: Kovalevski V.V., Deines Yu.E.

10.00-10.10 **Opening of the conference. Dr. Svetov S.A.**

10.10-10.30 **Deines Yu.E., Romashkin A.E., Rychanchik D.V.** (Petrozavodsk) Geological and Geophysical Investigations of Shungite Rocks of the Onega Synclinorium in the XXI Century

10.30-10.50 **Chabanyuk D.A., Matveev V.A.** (Petrozavodsk) Shungite Materials of the Zazhogino deposit, LLC NPK "Carbon-Shungit"

Section "Geological structure of shungite deposits"

10.50-11.10 **Filippov M.M., Deines Yu.E.** (Petrozavodsk) Prospects for the Discovery of a Shungite Deposit at the Nikonova Gora

Section "Litho- and geochemistry of shungite rocks; mineralogy of carbon and shungite rocks"

11.10-11.30 **Kovalevski V.V.** (Petrozavodsk) Shungite Carbon - Structural Features and Application to Technological Processes

11.30-11.50 **Break**

11.50-12.10 **Van Zuilen M.A., Qu Y., Lepland A.** (Trondheim) Structurally Heterogeneous Carbonaceous Matter And Mineral Templating Induced Graphitization In Karelian Shungite Rocks

12.10-12.30 **Paiste K., Fike D.A., Kirsimäe K., Mänd K., Paiste P., Jones C., Lepland A., Prave A.R., Romashkin A.E.** (St. Louis) Testing The Global Significance Of The Sulfur Isotope Record Of The Paleoproterozoic Zaonega Formation

12.30-12.50 **Kreitsmann T., Lepland A., Bau M., Prave A., Paiste K., Mänd K., Romashkin A.E., Kirsimäe K.** (Bremen) Rare Earth Elements And Carbon Isotope Record From The Carbonates Of The Zaonega Formation

12.50-13.10 **Mänd K., Lalonde S.V., Paiste K., Thoby M., Lumiste K., Robbins L.J., Kreitsmann T., Romashkin A.E., Kirsimäe K., Lepland A., Konhauser K.O.** (Tartu) What The Zaonega Formation Reveals About Global Geochemistry: An Iron Isotope Perspective

13.10-14.00 **Lunch Break**

14.00-14.20 **Rychanchik D.V., Romashkin A.E.** (Petrozavodsk) Estimation of the concentration of proxy elements in the section of the Zaonega Formation, Mo and U isotopies and redox evolution

14.20-14.40 **Movlanov Zh.Zh., Karshiev A.B., Abdullaev L.A.** (Tashkent) Mineralogical Features of Carbon-bearing Strata of the Promising Area Aitim (Uzbekistan)

14.40-15.00 **Pervunina A.V., Myasnikova O.V.** (Petrozavodsk) Litho-geochemical Factors and Petrophysical Properties of the Shungite-bearing Rock in the Contact Epigenesis Zone for Quality Assessment of Raw Material, Maksovo Deposit Karelia

15.00-15.20 *Kotelnikov A.R., Akhmedzhanova G.M., Suk N.I., Kotelnikova Z.A., Martynov K.V., Belousova E.O., Krinochkina O.K., Ananiev V.V. (Chernogolovka)* Study of Shungite Substance and Surface Water Composition of Shungite Deposits of Zaonezhye

15.20-15.40 *Break*

Section “Physicochemical properties of carbonaceous matter and shungite rocks and their transformation under the influence of natural and man-made factors”

15.40-16.00 *Biske N.S. (Petrozavodsk)* Comparative Raman Characteristics of Shungites and Metaanthracites of Contact-thermal Metamorphism

16.00-16.20 *Ryabinkin S.V. (Syktyvkar)* Shungite rocks are probable oil and gas source rocks?

16.20-17.40 *Excursions to the Museum of Precambrian Geology*

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Section “Scientific and technological aspects of the use of shungite rocks in large-scale industries (metallurgy, construction, agriculture, tires, rubber products, chemical complex, etc.)”

10.00-10.20 *Khachaturov A.A., Potapov E.E., Fionov A.S., Kolesov V.V., Reznichenko S.V. (Moscow)* Study of EMR Absorption of Various Natures by Shungite-filled Elastomeric Composites

10.20-10.40 *Bobrov A.P., Potapov E.E., Reznichenko S.V., Miroshnikov Yu.P., Alimpiev S.V. (Moscow)* Development of a Technology for Producing Tire Rubber Mixtures with an Increased Dosage of Shungite

10.40-11.00 *Potapov E.E., Bobrov A.P., Emelyanov S.V., Yuldashev T.U., Dudnik S.M., Salych E.G., Alimpiev S.V. (Moscow)* Study of the Possibilities of Using Shungite as a Carrier for the Ingredients of Rubber Compounds

11.00-11.20 *Potapov E.E., Bobrov A.P., Emelyanov S.V., Reznichenko S.V., Alimpiev S.V. (Moscow)* New Research in the Field of Application of Shungite (Karelite) in Polymer Processing Industries

11.20-11.40 *Break*

11.40-12.00 *De Ales L., Vilcu L., Ereemeev T. (Galazzano)* Shungite in Synergy with Microorganisms and Enzymes for Sustainable Agriculture with Zero Pesticide Residues

12.00-12.20 *Podolski V.I., Tyukov E.B., Chernousov D.I., Volkov V.V. (Voronezh)* The Use of Shungite-bitumen Binder to Increase the Wear Resistance of Asphalt Concrete Pavements

12.20-12.40 *Podolski V.I., Volkov V.V., Vnukov A.N. (Voronezh)* Substantiation of the Possibility of Using Shungite as an Effective Radio-absorbing Material

12.40-14.00 *Lunch Break*

14.00-14.20 *Golubev Ye.A., Antonets I.V., Shcheglov V.I. (Syktyvkar)* Microwave reflective and absorbing properties of shungite microlayers

- 14.20-14.40** *Yadykina V.V., Vyrodova K.S.* (*Belgorod*) Scientific Background and Experience in the Use of Shungite in Road Construction Materials
- 14.40-15.00** *Bogolyubova N.V., Romanov V.N., Mishurov A.V., Rykov R.A.* (*Dubrovitsy*) Bioregulators Based on the Mineral Shungite in Animal Feeding
- 15.00-15.20** *Break*
- 15.20-15.40** *Ikkonen E.N., Chazhengina S.Yu., Sidorova V.V.* (*Petrozavodsk*) Response of Onion Seedlings to Shungite Application
- 15.40-16.00** *Alimpiev S.V., Zasorin A.V., Zubkov D.G., Kirilyuk S.D.* (*Petrozavodsk*) Adsorbent of Mycotoxins of New Generation Based on Modified Shungite in the Feeding of Productive Animals

Section “Innovative materials and technologies”

- 16.00-16.20** *Nikonov I.N., Kochish I.I., Zasorin A.V., Zubkov D.G., Kirilyuk S.D., Alimpiev S.V.* (*St. Petersburg*) Experience of using feed additives based on shungite in industrial poultry farming
- 16.20-16.40** *General discussion*
- 16.40-18.00** *Excursion to the Shungite Center*