

*Human life is not everlasting,
but science and knowledge go beyond the centuries*
I. V. Kurchatov

Dear Colleagues!

2025 has become the anniversary year for the Federal Research Centre of Coal and Coal Chemistry SB RAS (FRC CCC SB RAS, Kemerovo), and in 2024 the Institute of Coal Chemistry and Material Science (ICCMS), currently incorporated in FRC CCC SB RAS, has celebrated the 50th anniversary, and the advancement chronology is herein introduced for your attention.

In 1968, Afanasiy Fedorovich Eshtokin, the First Secretary of the Kemerovo Region committee of the Communist Party of the Soviet Union (CPSU), applied to the Central Committee of CPSU for organising the subdivisions of the Institutes of Catalysis, Organic Chemistry, and Economics in Kuzbass. Reconciliation of funding for the research establishments lasted for six years. The direct predecessors of the scientific school of ICCMS can be considered to be the physicochemists from the Novosibirsk Academy Town. By the end of 1974, Professor Vladimir Andreevich Mikhaylov, Dr. Sci. in Chemistry, was elected rector of the Kemerovo State University, and in parallel the Physicochemical Department of the Institute of Inorganic Chemistry SB AS USSR (IIC SB AS USSR) was established in Kemerovo, organised by Vladimir Andreevich Mikhaylov and Nikolay Kondratyevich Eremenko, Dr. Sci. in Chemistry. Hard work had been made to supervise in moving to the building in Sovetsky avenue, No. 18. The building was reconstructed, and chemical laboratories were established.

In May 1977, the Regional Committee of CPSU addressed the matter related to the state of academic science in Kuzbass and measures for its development. On July 4, 1978, Presidium of the Siberian Branch of the Academy of Sciences of USSR enacted transformation of the Physicochemical Department in IIC SB AS USSR into the Complex Department of Physicochemical and Environmental Problems. Coordination of research performed by higher educational establishments and sectoral research institutes in Kuzbass, aimed at environmental research and the studies of new technological processes, was allotted to the Complex Department.

On the basis of the Complex Department of Physicochemical and Environmental Problems at IIC SB AS USSR and the Complex Department at the Institute of Mining SB AS USSR, in 1983 the Institute of Coal SB AS USSR was organised: this was the first institution of the Academy of Sciences of USSR in Kuzbass, from which the

Institute of Chemistry of Carbon Materials SB AS USSR was separated in 1990 for the goal to solve fundamental problems related to the development of carbon materials for construction and functional purposes and to provide further development of works in coal chemistry. The main research directions of the Institute of Chemistry of Carbon Materials were defined in the Act of the Presidium of the Siberian Branch on January 26, 1990. The structure of the Institute included four research departments, computation centre and experimental facility with the design engineering department. As early as in 1991, postgraduate education was opened in the Institute, and education in four specialties was launched: organic chemistry, physical chemistry, chemistry of high-molecular compounds, and chemistry of organoelement compounds. The Institute was headed by Yury Gavrilovich Kryazhev, Dr. Sci. in Chemistry.

On September 8, 1997, the Presidium of SB RAS issued Act No. 319 concerning incorporation of the Institute of Chemistry of Carbon Materials SB RAS into the Institute of Coal SB RAS, and renaming the organisation into the Institute of Coal and Coal Chemistry SB RAS. Gennady Ignatyevich Gritsko, Dr. Sci. in Technology, Corresponding Member of RAS, was appointed Director of the Institute.

In 2002, three laboratories have separated from the Institute of Coal and Coal Chemistry SB RAS and joined the recently organised Kemerovo affiliated branch of the Institute of Solid State Chemistry and Mechanochemistry SB RAS (ISSCM SB RAS). The affiliated branch was organised with the active participation of Yury Aleksandrovich Zakharov, Corresponding Member of RAS. The Kemerovo branch of ISSCM SB RAS, headed by Boris Petrovich Aduiev, Dr. Sci. in Physics and Mathematics, was registered as the juridical entity at the address: Kemerovo, Sovetskiy ave., 18. Research work was carried out within the priority direction “Industry of nanosystems and materials”. Methods for obtaining nanometer-sized diamond, nickel, copper and silver particles have been developed. For the first time in physicochemistry and materials science of nanometre-sized particles of iron group metals, the general nature of processes occurring during their synthesis was established; the conditions for agglomerate destruction and for suppression of aggregation processes leading to the formation of almost monosize particles were determined, as well as the

methods to govern the shape of agglomerates. By 2009, all researchers at the Institute had academic degrees. Postgraduate education was joined annually by 2-3 students (graduating from the Kemerovo State University and the Kuzbass State Technical University).

At the Days of Science opening in Kuzbass in 2009, academician Aleksey Emilyevich Kontorovich, Chairman of the Presidium of Kemerovo scientific centre SB RAS, announced: "In February 2009, the joint session of the collegiate administration of the Kemerovo Region and the Presidium of SB RAS was held. The Programme of scientific and technological provision for the innovative development of the economy of Kuzbass has been adopted; suggestions concerning changes in the structure of SB RAS have been made. The first step towards changes in the structure will be the establishment of the Institute of Coal Chemistry and Material Science".

Three independent institutes have been organised in 2010: Institute of Coal Chemistry and Material Science SB RAS, Institute of Coal SB RAS, Institute of Hyman Ecology SB RAS. Head of laboratory at the Borekov Institute of Catalysis SB RAS (Novosibirsk) academician Zinifer Rishatovich Ismagilov was appointed Director of ICCMS SB RAS.

In 2015, Kemerovo Scientific Centre and three above-indicated institutes were integrated into the Federal Research Centre of Coal and Coal Chemistry SB RAS. Kochetkov Valery Nikolaevich was elected Director of FRC CCC SB RAS. Later on, the Multi-Access Centre was organised, consolidating a broad range of unique and up-to-date equipment on the same ground to provide the high scientific level of research results. On the basis of ICCMS the technological department was organized, where innovative technologies of advanced coal processing are under development, and aggregate pilot plants have been launched: a bench for obtaining humic preparations from brown and oxidised coal, and a bench for preparing highly efficient sorbents from coal. The leading research directions under development are: coal chemistry, advanced coal processing, chemistry of carbon materials, composites and nanostructures, and hydrogen power engineering.

The successive XIV International Russian-Kazakhstan Symposium "Coal Chemistry and Ecology of Kuzbass" was held in Kemerovo on October 7-9, 2025. The event was dedicated to the 10th anniversary of FRC CCC SB RAS. The Sym-

posium takes place every year since 2011. This Symposium has become a traditional and significant event far beyond the boundaries of Kuzbass and the Siberian Branch of RAS. Starting from 2014, the Symposium is held as a Russian-Kazakhstan meeting, its founders and organisers were the Institute of Coal Chemistry and Material Science FRC CCC SB RAS and the Institute of Combustion Problems of the Committee of Science, the Ministry of Science and Higher Education of the Republic of Kazakhstan.

Opening of the XIV Symposium was participated by the Minister of Education and Science of Kuzbass Sofya Yurievna Balakireva, Director of the Research Institute for Complex Issues of Cardiovascular Diseases and Academician of RAS Olga Leonidovna Barbarash, Academic Adviser of the Institute of Combustion Problems (Almaty, Kazakhstan) Dr. Sci. in Chemistry, Professor, Academician of the National Academy of Sciences of the Higher School of Kazakhstan Zulkhair Aymukhametovich Mansurov, Chief Epidemiologist of the Kemerovo Region Corresponding Member of RAS Elena Borisovna Brusina, General Director of the West Siberian Test Centre Dr. Sci. in Technology Natalya Viktorovna Zhuravleva, Director of REC Kuzbass – Donbass Irina Aleksandrovna Ganieva.

Valentin Nikolaevich Parmon, Chairman of SB RAS, Academician of RAS greeted symposium participants via video conference. He stressed the high role of fundamental science in the area of coal chemistry and chemical materials science driven by FRC CCC SB RAS. "The current situation in the coal branch dictates the necessity to introduce developments into industry. We are attentively tracking the studies in the area of coal processing", – underlined Valentin Nikolaevich and wished the participants fruitful work.

The Symposium was participated in-person by 74 representatives of the scientific community, who made 46 oral presentations, among them 33 reports were made by researchers from other towns. During the Symposium, 42 online connections logged in. The scientific forum was participated by the leading scientists and experts from Moscow, Ekaterinburg, Tyumen, Omsk, Novosibirsk, Tomsk, Krasnoyarsk, Irkutsk, Novokuznetsk and other Russian cities, as well as from Mongolia and Kazakhstan.

Following the Symposium, collected works were published, and materials relating to the best reports of the participants are presented in the current issue of *Chemistry for Sustainable Development*.

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