Kronika * Chronicle

PROFESSOR LIUDA RASTEIKIENĖ – 75

On February 22, 2001 one of the most eminent Lithuanian chemists, Corresponding Member of the Lithuanian Academy of Sciences Professor Liuda Rasteikienė celebrated her 75th birthday.

She was born in Kaunas, in the family of the famous doctor Professor Pranas Mažylis. Here she graduated from the Aušra girls' gymnasium. In 1944 she began to study chemistry at Kaunas Vytautas Magnus University (later Kaunas University). After graduating from the University in 1950 she became a postgraduate student at the Institute of Organic Chemistry of the Academy of Sciences of the former USSR in Moscow and in 1953 defended her Ph.D. thesis on investigations of penicillin synthesis. After returning to Kaunas she was a lecturer in chemistry at Kaunas Polytechnical Institute. In 1958 L. Rasteikienė moved to Vilnius where she began to work at the Institute of Chemistry and Chemical Technology of the Lithuanian Academy of Sciences (at present the Institute of Chemistry) as a Senior Research Associate and the Head of the Sector of Organic Chemistry. In 1967 L. Rasteikienė became Director of the newly established Institute of Biochemistry which originated from some sectors of the Institute of Chemistry and Chemical Technology and Institute of Botany, and worked till 1985 in this position. In 1985–1991 she was Head of the Sector of Organic Sulfur Compounds and consultant.

The research interests of L. Rasteikienė include several areas of organic and pharmacological chemistry. L. Rasteikienė started research on the synthesis of penicillin and proceeded with her activities in search of new anticancer drugs in the area of 2-chloro alkylamines, and as a result the new highly effective and low-toxic compound named Hisfene was presented to the State Pharmacological Committee for clinical investigations. The synthesis and investigations of new antitumour compounds became one of the main research topics of the Institute of Biochemistry from 1967, and Prof. L. Rasteikienė started to work in the field of new alkylating agents containing 2-chloralkylthio group. The regularities of the addition of sulfenchlorides to the derivatives of unsaturated carboxylic acids, the reaction kinetics, the structure of the adducts and their isomerisation, reactions of hydrolysis of C–Cl bond were studied in detail, and the mechanisms of the reactions were suggested. These results were presented in her doctoral thesis (now it would be a habilitation work) "The synthesis and reactions of alkylthio halogenocarboxylic acids" which was defended in 1980.

In the following decade L. Rasteikienė with her colleagues investigated the oxidation of the derivatives of carboxylic acids containing alkylthio groups, the reactions of methanolysis, ammonolysis, elimination of hydrohalogenides, etc. Much attention was devoted to the nucleophilic addition reactions of sulfur-containing unsaturated carboxylic acids and their derivatives. In search of the relationship between the structure and biological activity, over 300 new compounds were synthesized and investigated, and some of them exhibited high anticancer activity.

Prof. L. Rasteikienė published over 120 scientific papers and was co-author of 10 inventions. She was a supervisor of six Ph.D. dissertation works.

In 1957 L. Rasteikienė became Associated Professor, in 1972 she was elected Corresponding Member of the Lithuanian Academy of Sciences.

Prof. L. Rasteikienė actively participates in the activities of the Lithuanian Academy of Sciences, is a member of the editorial board of the scientific journal "Chemija – Chemistry".

Congratulating Prof. L. Rasteikienė on her 75th birthday we wish her further success in all areas of her life.

Institute of Biochemistry

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IN MEMORIAM

ARIAN PROKOPCHIK
(December 26, 1924 – March 1, 2001)

Lithuanian chemical community has lost one of its most outstanding members, Corresponding Member of the Lithuanian Academy of Sciences, Professor Arian Prokopchik.

Born in Kaunas, he graduated from Chemical Engineering Faculty of Kaunas University in 1948. While studying he began to work at Physical Chemistry Department, later was a lecturer of chemistry and carried his first research work under the guidance of famous Lithuanian chemist Jonas Janickis who was educated and began his research in prewar Germany. In 1952, A. Prokopchik defended his Ph. D. work devoted to hypochlorite decomposition in solution.

In 1953, A. Prokopchik went to the Institute of Chemistry and Chemical Technology of the Lithuanian Academy of Sciences (now the Institute of Chemistry) in Vilnius and served for many years as Deputy Director and Head of Laboratory of Inorganic Chemistry. Here he formed an efficient group of young researchers. In the following decade they investigated the catalytic decomposition and other reactions of many unstable oxidants (hypochlorite, chlorite, perococompounds). Some of those results were presented in A. Prokopchik's Dr. Sci. dissertation (1964).

Among the unstable inorganic compounds studied by A. Prokopchik trivalent copper complexes should be mentioned. A. Prokopchik initiated a systematic investigation of this unusual and then exotic oxidation state of copper. Trivalent copper became famous after discovering in 1987 high-temperature superconductors in which Cu(III) was shown to be the principal component. For his investigations of trivalent copper compound solutions A. Prokopchik was awarded the Lithuanian state prize in science in 1983.

In 1965 when the Institute was reorganized and only one research field (surface finishing processes) remained, A. Prokopchik began to study the catalytic reactions involved in electroless metal deposition – oxidation of reducing agents (hypophosphite, borohydride), autocatalytic metal ion reduction.

In the eighties, A. Prokopchik took an active part in forming the fundamentals of new plastics metallizing processes, using initial deposition of electroconductive metal sulphide layers on which metal coatings could be electrodeposited ("direct" electroplating of plastics). These metallizing processes later found very wide practical applications.

In 1972, A. Prokopchik was elected Corresponding Member of the Lithuanian Academy of Sciences and served as Deputy Secretary of Division of Chemical and Biological Sviences for a long time. For many years he was engaged in editing "Transactions of the Lithuanian Academy of Sciences" and "Chemija–Chemistry" (Editor-in-Chief in 1990–1994).

A. Prokopchik published over 150 scientific papers. He formed a large scientific school in the field of catalytic redox reactions. He was a supervisor for 25 young researchers, 5 of them became habilitated doctors.

Along with deep scientific insight and knowledge of various fields of chemistry, A. Prokopchik's interests were much wider comprising history, art and literature.

The memory of A. Prokopchik, a talented scientist, teacher and research leader, a tolerant and interesting person, will always remain with us.

Prof. Algirdas Vaškelis