ALEKSEI NIKOLAEVICH KOST (ON HIS 60th BIRTHDAY)



October 18, 1975, was the 60th birthday of Aleksei Nikolaevich Kost, assistant editor-in-chief of Khimiya Geterotsiklicheskikh Soedinenii (Chemistry of Heterocyclic Compounds), well-known organic chemist, outstanding specialist in the chemistry of heterocyclic nitrogen compounds, and professor of the department of organic chemistry of Moscow State University (MSU).

Professor Kost graduated with a degree in chemistry from MSU in 1939, having completed his thesis under the supervision of the distinguished teacher and scientist A. P. Terent'ev. Professor Kost's graduate study was interrupted by the war. In July 1941, he left for the front as a volunteer and remained in the field forces for the entire war. From 1946 to 1958, Professor Kost was, successively, an assistant and an assistant professor, and in 1958 he became a professor of the department of organic chemistry of the chemistry faculty of MSU. He defended his master's dissertation in 1947 and his doctoral dissertation in 1956.

His multifaceted scientific interests and his profound erudition enabled Professor Kost to make a significant contribution to various fields of organic chemistry. In his first outstanding investigations, which were the basis of his dissertations, he created a general method for the introduction of a cyanoethyl group into organic compounds. His method for cyanoethylation is today extremely widely used. His comprehensive studies of the transformations of hydrazine derivatives led to the development of methods for the synthesis of pyrazole derivatives. The development of research in this area made it possible to discover a fundamentally new rearrangement of acid arylhydrazides to 2-aminoindole derivatives. Professor Kost also has made a large contribution to the chemistry of indole. He developed the theory and practice of electrophilic substitution reactions in the indole series, investigated the cationotropic rearrangements of alkyl- and acylindoles, discovered a number of methods for the synthesis of condensed heterocyclic systems including an indole fragment. A fundamentally new method developed under his supervision involves the introduction of diverse hetaryl residues into the molecules of the most diverse organic compounds.

Professor Kost has published more than 450 scientific papers and has obtained over 100 author's certificates. Among his students, there are more than 120 graduating students at MSU, 46 graduates with mas-

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ter's degrees, and 10 graduates with doctoral degrees in the chemical sciences. Professor Kost lends a great deal of assistance in the training of national scientific specialists in the Ukrainian, Azerbaidzhan, Lithuanian, Tadzhik, and other union republics.

Together with his students and co-workers, Professor Kost has developed and introduced into the national economy a whole series of original inhibitors of atmospheric corrosion. He has discovered and put into practice a means for the protection humans and animals from blood-sucking insects and mites and ticks — the preparation "benzimin." Growth stimulants, in the development of which Professor Kost actively participated, have been used in the national economy for many years. Relatively recently he obtained new antioxidants and a number of special-purpose biologically active agents and created and successfully subjected to clinical testing new medicinal preparations. In recent years Professor Kost has been intensively investigating the microbiological transformation of chemical substances and studying the mechanism of the function of chemoreceptors.

The scientific and pedagogical endeavors of Professor Kost are combined with a great deal of editorial work. He is a member of the editorial boards of international journals and publications — Advances in Heterocyclic Chemistry, Organic Preparation and Procedures, Journal of Heterocyclic Chemistry — and is the editor of many monographs. He has frequently represented Soviet science at international congresses and symposiums and has gone abroad to many countries to deliver lectures.

Professor Kost's versatile pedagogical talent, his profound scientific fundamentalism, and his noble humane qualities have won the love and respect of all of his colleagues.

The editorial board of Khimiya Geterotsiklicheskikh Soedinenii (Chemistry of Heterocyclic Compounds) warmly congratulates Professor Kost on his 60th birthday and wishes him many more years of fruitful scientific and pedagogical activity.

List of the Most Important Scientific Research

of A. N. Kost

- 1. A. P. Terent'ev and A. N. Kost, "Cyanoethylation," in: Reactions and Methods for the Investigation of Organic Compounds [in Russian], Vol. 2, Goskhimizdat, Moscow (1952), p. 47.
- 2. A. N. Kost and V. V. Ershov, "Synthesis and properties of pyrazolines," Usp. Khim., 27, 431 (1958).
- 3. A. N. Kost and I. Grandberg, "Aldazines and ketazines," Usp. Khim., 28, 921 (1959).
- 4. Yu. A. Berlin and A. N. Kost, " Δ^2 -Piperideines," Usp. Khim., <u>29</u>, 220 (1960).
- 5. A. N. Kost, G. A. Golybeva, A. P. Terent'ev, and I. I. Grandberg, "Opening of the pyrazoline ring with cleavage of the nitrogen-nitrogen bond," Dokl. Akad. Nauk SSSR, 144, 359 (1962).
- 6. I. I. Grandberg, A. N. Kost, and Yu. A. Naumov, "Common character of rearrangements with cleavage of an N-N or N-O bond and the formation of a nitrile group," Dokl. Akad. Nauk SSSR, 149, 838 (1963).
- 7. A. N. Kost and R. S. Sagitullin, "Monoalkylhydrazines," Usp. Khim., 33, 361 (1964).
- 8. A. N. Kost and I. I. Grandberg, "Progress in pyrazole chemistry," Advances in Heterocyclic Chemistry, 6, 347 (1966).
- 9. L. G. Yudin, V. A. Budylin, A. N. Kost, and V. I. Minkin, "Orientation during electrophilic substitution in the benzene ring of indole compounds," Dokl. Akad. Nauk SSSR, <u>176</u>, 1096 (1967).
- 10. A. N. Kost, P. B. Terent'ev (Terentev), and L. V. Moshentseva, "Synthesis of fusaric acid and its derivatives," J. Indian Chem. Soc., 45, 1109 (1968).
- 11. A. N. Kost, R. S. Sagitullin, and V. I. Gorbunov, "Formation of α -carbolines and pyrimido[1,2-a]-indoles by condensation of 2-aminoindoles with 1,3-diketones," Dokl. Akad. Nauk SSSR, 182, 838 (1968).
- 12. S. I. Suminov and A. N. Kost, "Nucleophilic addition of the amino group to an activated carbon-carbon double bond," Usp. Khim., 38, 1933 (1969).
- 13. A. N. Kost and K. V. Grabliauskas, "Über die Struktur der Methylierungsprodukte von Phthalazon und Phthalazon-4-carbonsäure," J. Prakt. Chem., 312, 542 (1970).
- 14. A. N. Kost, G. A. Golubeva, and Yu. N. Portnov, "Cationotropic rearrangement of 1-aryl-2-acylhydrazines to 2-aminoindoles," Dokl. Akad. Nauk SSSR, 200, 342 (1971).
- 15. A. N. Kost, M. A. Yurovskaya, and F. A. Trofimov, "Tetrahydro-γ-carbolines," Khim. Geterotsikl. Soedin., 291 (1973).
- 16. A. N. Kost, R. S. Sagitullin, and A. P. Terent'ev, Exercises and Problems in Organic Chemistry [in Russian], Vysshaya Shkola, Moscow (1974).

- 17. A. K. Sheinkman, S. I. Suminov, and A. N. Kost, "N-Acyl pyridinium salts and their benzo analogs," Usp. Khim., 42, 1415 (1973).
- 18. A. N. Kost, P. B. Terent'ev, M. B. Kuplet-skaya, L. V. Modyanova, A. S. Demina, M. P. Khvorychev, and E. V. Shushenchaeva, "Microbiological transformation of 2-methyl-5-ethylpyridine," Dokl. Akad. Nauk SSSR, 214, 947 (1974).