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Działalność i osiągnięcia Katedry Zakładu Technologii Chemicznej Uniwersytetu Jagiellońskiego w Krakowie w latach 1951-1997 oraz związanych z nimi zespołów badawczych: Zespołu Sit Molekularnych i Adsorbentów (1970-1999), Zespołu Syntezy Zeolitów (1970-1987) i Zespołu Chemii Polimerów (1970-1999)

The activity and achievements of the Chair and Department of Chemical Technology at the Jagiellonian University in Cracow (1951-1997), and of associated research teams: Team of Molecular Sieves and Adsorbents (1970-1999), Team of Synthesis of Zeolites (1970-1987) and Team of Chemistry of Polymers (1970-1999)

SUMMARY

The paper traces the history and work of the Chair and Department of Chemical Technology at the Jagiellonian University in Cracow, and of associated research teams and groups, in the years 1951-1999. It presents the main areas of research conducted at the Chair: research on the synthesis, modification, chemical and physico-chemical properties and applications of zeolites, silica gels, active carbons, bleaching earths, organic ion exchangers, polymeric aids (mainly of the polyelectrolyte type) for the mining industries (including their use in flotation, flocculation and drilling flush), the paint and varnish industry, and the cosmetic industry. The paper also covers research on obtaining stable, concentrated and purified solutions of hydrogen peroxide. The paper lists the major scientific and teaching achievements of the particular teams, such as: the pioneering work on the synthesis (chemistry) of zeolites, which resulted in developing the technology for the production of type A, X and Y zeolites; the specification of the conditions and the investigation of the mechanism for the synthesis and modification of large port mordenite, type L and T zeolites, phillipsite, chabazite, ZSM-5, TMA-offretite, Nu-1, boralites, ferrisilicates, chromisilicates and silicalites of the MFI type; the development of a method for isolating n-alkanes; basic work on water-soluble polymers and their applications, which led to the implementation of the research in industry; developing and implementing the technology for the concentration and purification of hydrogen peroxide solutions; as well as introducing all of those topic into university teaching. Discussed in the paper are also the Chair's ties with research centres in Poland and abroad, as well as its collaboration with the industry, and its participation in government-sponsored research programmes. The paper also gives a list of the Ph.D. dissertations (31) and dissertations for post-doctoral degrees (*Habilitationsschriften*) (3) that were defended by the faculty members of the Chair and Department, and gives an estimate of the number of master's theses contributed by its students (ca. 480). A full bibliography of publications by the faculty members has also been given, including publications relating to experimental work (254), monographs and reviews (26), textbooks, manuals and popular scientific article (27), as well as patents (58). The paper also contains fourteen photographs relating to the history and work of the Chair and Department.

Analecta – Studia i Materiały z Dziejów Nauki
[Analecta – Studies and Materials on the History of Science]
X, 2001, 1, 163-223