

# 60 years of the Faculty of Chemical Technology and Engineering

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The Faculty of Technology and Chemical Engineering of the Technical-Agricultural Academy was established in 1952 (initially as a Chemistry Faculty) and is one of the two oldest faculties of the first technical higher school - the Evening Engineering School - in the history of Bydgoszcz. At first, part of the faculty (so-called Faculty A) was located at the Soda Plants in Mątwy, while the second part (so-called Faculty B) was located in the "Erg" Chemical Plants in Bydgoszcz. Stefan Jajte, Ph.D. (Eng), was appointed Dean of Faculty A. The first Dean of Faculty B (between 1951-1953) was Jerzy Olszewski, Ph.D. (Eng), the minister of chemical industry to be; the next one (in 1953-1957) was Assistant Professor Antoni Swinarski, Ph.D. (Eng).

In 1957 the Faculty of Chemistry suspended its activity. This suspension met the disapproval of the representatives of industry, economic life and the political authorities of the voivodeship because the chemical plants of Kujawy and Pomorze were experiencing a lack of personnel, and the economic development plans of the region anticipated a considerable expansion of this industry. The reactivation of the Faculty under the name of the Faculty of Chemical Technology occurred based on a regulation of the Minister of Higher Education from May 16, 1966. Assistant Professor Alfons Borchardt, Ph.D. became the Dean of the Faculty. At the moment of its establishment, the Faculty employed 12 scientific-didactic employees. The laboratory base consisted of the Institute of General Chemistry, the Cellulose Technology Laboratory and the Qualitative and Quantitative Chemistry Laboratory. The Faculty was located in part of the first and second floor of the building at 3 Seminarjna St., occupied by the Teacher's School until 1965. The wings of the building, as well as the third and fourth floors housed the dormitory, cafeteria and private apartments. The building (erected in 1905-1907) did not have an electrical, water and gas installation which would meet the requirements of the chemistry faculty. Because of this, the dean and the Faculty Council had to solve the difficult task of creating an organizational concept of the faculty, adjusted to programmed specializations, as well as of acquiring further scientific-didactic and technical employees, especially for future specialist teams. Thanks to favors won with the university authorities, to the aid of industrial plants and to the commitment of all the employees of the Faculty, the accommodation base underwent general reconstruction and adaptation. In 1972 the teaching staff of the Faculty consisted of 40 people, including seven assistant professors. These accomplishments were the basis of obtaining a ministry permit by the Faculty for starting full-time master's studies; the first enrolment took place in 1973.

In 1975, after establishing the Technical-Agricultural Academy (through joining the Higher School of Engineering with the Bydgoszcz branch of the Agricultural Academy in Poznań), the Faculty was converted into the Institute of Technology and Chemical Engineering, and the previously existing teams were transformed into scientific-didactic plants. In 1978, the Institute of Agricultural Chemistry, led by Professor Włodzimierz Łoginow, Ph.D., Eng. was added to the Institute of Technology and Chemical Engineering from the Agricultural Institute. At the same time, the team of assistant professor Wojciech Wiśniewski, Ph.D. from the Agricultural Institute was joined with the Institute of General Chemistry.

In 1985, the Institute was renamed as the Faculty of Technology and Chemical Engineering and the internal structure changed into departments and independent institutes.

In 1998, at the request of the Senate of the Technical-Agricultural Academy, the previously independent Institute of Mathematics and Physics was joined with the Faculty of Technology and Chemical Engineering, while retaining large autonomy.

On October 30, 2006, in the Auditorium Novum the President of the Republic of Poland Lech Kaczyński, in the presence of the University Chancellors and employees put his signature under the act which transformed the Technical-Agricultural Academy into the University of Technology and Natural Sciences.

During its existence, the Faculty employees performed the highest functions in the structures of our University. The first chancellor of the High School of Engineering, from 1951 to 1967, was a chemist, Full Prof. Ernest Pischinger, Ph.D. and because of this, among other things, in 1991 the Senate of the Technical-Agricultural Academy passed a resolution at its 138<sup>th</sup> meeting regarding naming the Faculty lecture hall after Professor E. Pischinger. On April 22, 2004, a festive celebration took place commemorating the first ATR Chancellor and, in the presence of the daughter of prof. E. Pischinger, among other people, a commemorative plaque was revealed and papers were presented related to the family life, scientific and organizational activity of prof. Ernest Pischinger. In 1974–1981 the ATR chancellor was prof. Jerzy Roszak, Ph.D., (Eng), head of the Institute of Chemical Engineering, and in 1993–1996 it was prof. Jerzy Pączkowski, Ph.D. (Eng), head of the Department of Physical Chemistry and Organic Compounds Technology. Since 2008 the function of the Chancellor is filled in by Antoni Bukaluk, PhD (Eng) - Associate Professor of the University of Technology and Natural Sciences from the Institute of Mathematics and Physics. The employees of the Faculty also fulfilled the function of the pro-vice chancellor.

After reactivating the Faculty, starting 1996 the roles of deans were fulfilled by the following people: assistant professor Alfons Borchardt, Ph.D. (1966-1971), assistant professor Bogdan Dirska, Ph.D. (1971-1978), prof. Włodzimierz Łoginow, Ph.D. (1978-1981), assistant professor Michalina Sierocka, Ph.D. (1981-1984), assistant professor Kazimierz Kozłowski, Ph.D. (Eng). (1984-1987), assistant professor Alfons Borchardt, Ph.D. (1987-1990), Wojciech Wiener, PhD, Eng. (1990-1996), Ph.D. Jerzy Graca, Jerzy Graca, prof. at ATR (1996-2002), Ph.D. (Eng). Edwin Makarewicz, Professor at ATR (2002-2005), Ph.D. Jerzy Graca, prof. at UTP (2005-2008), Ph.D., Eng. Wojciech Korpala, prof. at UTP (2008 - until his tragic death on 08/24/2010); the current dean is Ph.D. Kazimierz Piszczek.

Didactic and scientific activity at the Faculty (with the exception of the Institute of Mathematics and Physics) is conducted at 6 departments and 4 independent institutes. It employs in total 62 academic teachers, including 16 independent scientific employees – 6 with a professor title and 10 with the title of doctor habilitatus (Ph.D.), 24 scientific or engineering-technical employees. The administrative staff of the Faculty includes 7 employees, while the technical-economic staff - 17 employees.

The Faculty (with the exception of the Institute of Mathematics and Physics) is located in a historic building at 3 Seminaryjna St. The didactic-scientific units of the Institute of Mathematics and Physics occupy rooms in building 2.5 at S. Kaliskiego St. in Fordon.

### Scientific activity

The Faculty of Technology and Chemical Engineering realizes scientific studies, as well as education in the broadly understood field of chemical sciences in which chemical technology, as well as chemical engineering enrich the level of the carried out works whose effects find their utilitarian application. The scientific field of *chemistry* has developed the most in the last dozen or so years at the Faculty. The work of independent scientific employees who deal with fields related to chemistry at the Faculty provides the possibility of conducting scientific studies at the borderline between various fields which is especially inspiring – it also provides the possibility of a multi-aspect approach to the themes of Ph.D. works. One should stress the broad spectrum of utilitarian studies and implementations, facilitated by the current structure of the Faculty.

The currently conducted scientific studies at the Faculty include eight main topics:

- Photochemistry of nanometric and polymeric organic compounds
- Tests of organic compound structures
- Biotechnology and bioengineering, food technology and equipment for the chemical and agricultural processing industry
- Technology, process engineering and equipment for the chemical and food industry
- Physical chemistry and polymer technology (together with recycling), including the technology of polymer protective coatings
- Environmental protection technology, technology of waste management and industrial waste management
- Tribochemistry
- Computer aid techniques in mass spectrometry.

Works related to the development of scientific fields are planned within the following tasks: tests of metallic and metal-organic catalysts using instrumental methods, with special consideration paid to computer-aided mass spectrometry techniques; photochemistry, photo-physics, application of polymerization photo-initiators and polymer photo-physics; synthesis of free-radical polymerization photo-initiators; structure of carbonyl tautomers, pyridine-derivatives. The realized tests consequently stress topics related to broadly understood environmental protection and shaping of pro-ecological conduct, taking into account the rules of “green chemistry”.

Studies related to the program of Poland’s sustainable development and the innovative strategy of the Kujawsko-Pomorskie region include methods of monitoring pollution in environmental samples, studies over transformations of organic compounds in the environment, tests of loose compound agglomerations in the environment, as well as the modification of processing and physical-mechanical qualities of thermoplastic polymers and their recyclates.

Studies on increasing the innovativeness and competitiveness of Polish economy are focused on searching for economical natural absorbents for removing organic and nonorganic fouling from waste; on a tribochemical testing of lubricating oils; on testing the technology of preparing a highly-qualified ecologic sowable material, on testing the process of PVC processing and modification. The anticipated results in the field of testing PVC, practically applied in production, may contribute to improving the properties of polychlorovinyl plastics manufactured on a large scale in many plants of our region and country, strengthening their market position against the growing competition of foreign companies.

During the realization of scientific works, the Faculty cooperates with numerous scientific centers - with chemical and food faculties

of universities, polytechnics and agricultural academies, with the Polish Academy of Sciences and the chemical and food departmental institutes. Cooperation with the Anwil SA Plants in Włocławek, the “Zachem-Ciech” Plants in Bydgoszcz, the Horticultural Plant Breeding Seed Production and Nursery in Ożarów Mazowiecki, the “Spomasz” Toruńskie Mill Machine Plants, “Polfa” Plants in Starogard Gdański and “UniLever Polska” in Bydgoszcz is carried out based on long-standing frame agreements regarding mutual cooperation. Employees maintain regular contacts with foreign scientific-research centers in USA, Germany, France, Sweden, Russia, Finland, etc., constantly exchanging experience, information and publications. Following is a list of foreign centers with which the Faculty currently cooperates:

- Bowling Green State University, USA, laboratory of D.C. Neckler’s – polymer photochemistry. The cooperation led to several scientific internships, joint papers and a joint monograph
- Karolinska Instytutet, Stockholm, laboratory of L.-A. Linden – photochemistry of dental materials. The cooperation led to scientific internships and numerous scientific papers
- University of Notre Dame, USA, cooperating person Gordon L. Hug – electron transferring processes. As part of the cooperation, joint scientific research is conducted and shared publications are issued
- Ecole Nationale Supérieure de Chimie de Mulhouse, Département Photochimie Générale, cooperating person J.P. Fouassier – topics related to the free-radical polymerization photo-initiators. Joint scientific research and publications
- Agreement with the University of Technology in Hamburg, supported by DAAD (Detacher Akademischer Austausch Dienst e.V.), regarding the production and testing of PVC nanocomposites with carbon nanotubes. As part of this cooperation, scientific internships were realized in the TUHH Institute of Composites
- Others: University of Jyväskylä, Department of Chemistry in Finland; the American research company Investigen Inc. seated in Hercules, California, the COST Action 846 program – Bioencapsulation, Innovation and Technologies.

The continuation of studies carried out until today is justified by the results obtained thus far (publications, patents, doctoral defenses – two Ph.D. theses in 2007, one doctoral thesis in 2009, two admitted habilitation programs almost finished, two admitted Ph.D. programs, two procedures for granting the title of professor). Four individual scientific projects proposed in 2008 and three in 2009 were qualified for financing and are currently in the process of realization. As a result of the scientific activity of the Faculty employees, documented among other things with publications in renown foreign magazines with a high *impact factor* (IF) and the carried out unit parameter evaluation, the Faculty of Technology and Chemical Engineering has been classified since 2002 by the Committee of Scientific Studies as one of the leading second-category units. In 2006 the Faculty achieved a high position on the list of the Minister of Science and Higher Education, and on September 30, 2010 the Minister of Science and Higher Education, after carrying out another parameter evaluation, has awarded the Faculty the FIRST, highest category for a scientific unit; thus, the Faculty of Technology and Chemical Engineering has fallen under category A which includes the best scientific units in the country. The quality of the published studies carried out at the Faculty is proven also by a large number of implementations (mainly by the teams of prof. J. Gaca, prof. W. Weiner and prof. T. Sterzyński), as well as a large number of citations of publication authors – employees of the Faculty (several dozen, and in some cases even over 200) listed in the *Science Citation Index*.

Since September 2009 the realization of the “RCT II stage” - a project financed as part of the Regional Operational Program in the Kujawsko-Pomorskie voivodeship for 2007-2013 - was sped up. The

realization of the project at the Faculty of Technology and Chemical Engineering started with modernization works, leading to creating new laboratories and workshops. Rooms were modernized for the Regional Center of Food Testing and Food Industry Equipment - 2 laboratories were created with 8 workshops in them. The following were created in the Laboratory of Process Engineering, Food Industry Technology and Equipment: Bioprocessing Workshop, Workshop of Unit Processes in Food Technologies; Workshop of Evaluating Equipment and Processing Lines; Workshop of Designing Processes in Food Technology. The following were created in the Laboratory of Testing Food and Food Materials: Workshop of Spectroscopic Food Analyses; Workshop of Instrumental Methods for Marking Food Component Properties; Workshop of Chromatographic Methods of Marking Food Components; Workshop of Organoleptic Food Tests.

Adaptation of the rooms finished in mid-January 2010. At the same time, the second stage of the task realization started, i.e. the purchase of scientific-research equipment which is to be installed in the newly adapted workshops and in already functioning rooms. The equipment has been laid out in the rooms of the entire Faculty. The most important equipment purchased for the Regional Center of Food Testing and Food Industry Equipment includes: an AAS spectrophotometer; a TOC carbon analyzer; UV-Vis and UV-Vis-NIR spectrometers; a liquid chromatograph; a fermenter; a lyophilizing cabinet; a rotational viscometer; two stations for marking nitrogen via the Kjeldahl method; a station for marking fat using the Soxhlet method; a spray dryer; a machine for testing food resistance against biting, smashing, etc. and a testing machine, as well as numerous other equipment and measuring devices necessary for the process of preparing samples and basic laboratory activities. Initially, an amount of 5 million PLN was allotted for the purchases and it was fully used. The purchased equipment increased the research capabilities of the Faculty. The main aim of the project is to help regional entrepreneurs through tightening cooperation between the University and industry. However, this will not be easy because many small and medium companies are counting on finished innovative solutions and have no money on studies over the development of technologies. The Faculty is facing a difficult challenge that it intends to fulfill. Establishing cooperation with Small & Middle Size Companies, acquiring joint research projects, e.g. Research & Development and others, may create numerous possibilities in the scope of working out ideas for new, innovative solutions, new patents, preparing the implementation of solutions for industry, solutions to different company problems, creating consortiums for solving technological problems, facilitating the transfer of knowledge between the University and Industry. The "RCI 2<sup>nd</sup> stage" project is during realization. Further renovation works will commence starting the second quarter of 2011. A Regional Center of Testing Polymers and Polymer Plastic will be created at the Faculty of Technology and Chemical Engineering. The purchase of equipment for this Laboratory has been planned for the first quarter of 2012, but the first orders have already been realized. The purchased "System for Rheological Measurements" already now increases the research potential of the Polymer Technology Plant which will supervise the work of the Center of Testing Polymers and Polymer Plastic. However, it must be noted that both Centers would not exist were it not for the commitment of the deans of the Faculty of Technology and Chemical Engineering - the current one, Kazimierz Piszczek, Ph.D. and the late Wojciech Korpala, Ph.D., Eng. prof. of the University of Technology and Natural Sciences. It is especially the huge input and personal commitment of the late prof. Wojciech Korpala that gave shape to this project at our Faculty. The aims put forward included such management of the equipment and strengthening of cooperation with local entrepreneurs in order to bring tangible benefits for Our Region, which was the assumption of the entire "RCI 2<sup>nd</sup> stage" project.

Apart from the equipment purchased as part of the RCI 2<sup>nd</sup> stage, the departments and institutions of the Faculty possess laboratories fitted with specialist scientific devices (e.g. gas chromatographs with MS, FID, ECD detectors; liquid chromatographs with UV detectors, UV-Vis spectrometers, an NMR spectrometer, an X-ray diffractometer, bioreactors, argon lasers, reactors for conducting tests in a quarter and semi-technical scale, laser analyzer of molecular sizes, etc.) which enables, among other things, specifying the content of heavy metals using the ASA method, performing UV, Vis, IR, NMR tests, carrying out analyses on a HPLC chromatograph, performing derivatographic analyses, specifying particle size distribution of loose mixtures in liquid dispersion and air, performing X-ray and crystallographic phase analyses with full interpretation of powder photographs, performing physical-chemical analyses of metal surfaces, surfaces from paint materials, paints in liquid state and anti-corrosive protection state. In recent years the faculty has acquired equipment for nanosecond flash photolysis and a modern Nikon Eclipse 400 polarizing optical microscope with a visual detector, and DSC - device for thermal tests using differential scan calorimetry.

The Faculty also possesses a library with a reading room, functioning as the Main Library of the University of Technology and Natural Sciences. The library gathers publications from the field of widely understood chemistry and chemical technology. At the moment, the library's collection holds approx. 8 thousand volumes and 18 titles of Polish magazines. The readers have at their disposal reading rooms with 44 seats, as well as 3 computer stations and 3 xerox machines. Thanks to the computer network, the library and various institutes and departments of the Faculty have broad access to world-wide scientific information - these are specialist databases financed to a large degree by the Faculty.

#### Didactic activity

The Faculty of Technology and Chemical Engineering currently offers 1<sup>st</sup> and 2<sup>nd</sup> degree full time and extramural studies.

The 1<sup>st</sup> degree full-time studies (engineer) last 7 semesters, while 2<sup>nd</sup> degree studies (master's degree) - 3 semesters. 1<sup>st</sup> degree extramural studies last 8 semesters and 2<sup>nd</sup> degree studies - 3 semesters.

**Full-time studies** offer the following majors:

- chemical technology - 1<sup>st</sup> and 2<sup>nd</sup> degree
- food technology and human nutrition - 1<sup>st</sup> degree
- material engineering - 1<sup>st</sup> degree

**Extramural studies** offer the following majors:

- chemical technology - 1<sup>st</sup> and 2<sup>nd</sup> degree
- material engineering - 1<sup>st</sup> degree

The Faculty runs also extramural **postgraduate studies** in the field of:

- food technology
- industrial biotechnology
- environmental protection technologies
- technology and processing of polymers and protective coatings.

Until December, 2010, 3 854 students graduated from the Faculty of Technology and Chemical Engineering, including 2 442 full-time students, 755 extramural students (engineering) and 214 from post-bachelor master's studies.

#### Development of academic staff

The activities of the Faculty related to the realization of tasks included in the plan of essential statutory activity to a large degree take into consideration the needs of academic staff development, especially doctoral defenses, habilitation programs and obtaining the title of professor. Since October 27, 2003, the Faculty has the right to grant the scientific degree of Doctor of Chemical Science in the field of *chemistry*. Until 2010, the title of doctor was granted to 6 people, including 4 employees of the Faculty. The assistants

obtained the scientific title of doctor also at other universities - in the fields of chemical technology, chemical engineering and food technology. Currently, proceedings are carried out for granting the title of full professor to Edwin Makarewicz, Ph.D., Eng. On February 2, Kazimierz Piszczek, PhD, finished his habilitation program, while three more (to be finished in 2011) habilitation programs are pending - that of Z. Kucybała, M. Domoradzki, A. Gorączko. The admittance into the next two habilitation programs should occur this year.

### Outstanding accomplishments of the Faculty employees

The Faculty employees hold a number of significant accomplishments related to scientific-research activity. Among them, one should list the title of an honorary doctorate obtained by prof. Jerzy Graca, Ph.D. from the Jarosławski University of Technology in Jarosław, Russia. In 2010, His Magnificence Chancellor of the University of Technology and Natural Sciences, Antoni Bukaluk, Ph.D., Eng, full professor at the University of Technology and Natural Sciences, was awarded an honorary doctorate from the Odar Yurdu University in Baku (Azerbaijan). Following is a list of significant awards and accomplishments obtained in recent years by the employees of the Faculty:

#### 2010

1. Silver Medal at the IV INTERNATIONAL WARSAW INVENTION SHOW IWIS 2010 for "Method of obtaining polyolefin composite with comminuted waste lignocelluloses-mineral material" for K. Piszczek and Wł. Urbaniak;
2. Bronze Medal at The Belgian and International Trade Fair for Technological Innovation, Brussels, for "Innovative applications of waste mineral-cellulose material" for K. Piszczek and Wł. Urbaniak
3. Bronze Medal at the IV INTERNATIONAL WARSAW INVENTION SHOW IWIS 2010; for "Method of composite manufacturing by means of suspension conversion of polyvinylchloride with lignocelluloses-mineral fillers" for K. Piszczek and Wł. Urbaniak;
4. Silver Medal at the Concours Lepine Le Alon International de L'Invention de Paris 2010, ASSOCIATION DES INVENTEURS ET FABRICANTS FRANCAIS, for W. Weiner and W. Korpala
5. European grant as part of the PO IG for 2007-2013; titled "Winning new metal complex dyes type 1:2" Ewa Maćkowska
6. Cooperation with UKW regarding studies on polymer-wooden composites, J. Tomaszewska, S. Zajchowski.

#### 2009

1. Gold Medal for the scarifier at The Belgian and International Trade Fair for Technological Innovation, Brussels, for W. Korpala, W. Weiner
2. PTCH reward of Professor Kemula for J. Kabatc
3. Diploma of the Minister of Science and Higher Education for the project titled "Diamond Electrodes Produced by HF CVD Method for Electrochemical Applications" for A. Wrzyszczyński
4. The First Yong Investigator Prize; Scientific Committee of the V Scientific-Technical Conference Advance In Petroleum and Gas Industry and Petrochemistry, Lviv for K. Skórczewska
5. Participation in 2 Consortia realizing European POIG Projects, J. Tomaszewska, St. Zajchowski
6. Realization of the RCI 2<sup>nd</sup> stage POIG project in Bydgoszcz.

#### 2008

1. Gold Medal with distinction for the invention "Diamond Electrodes Produced by HF CVD Method for Electrochemical Applications", Association of Polish Inventors and Rationalizers, Management Board of Targi Warszawskie S.A. for A. Wrzyszczyński

2. Silver Medal for the Invention of: Diamond Electrodes Produced by HF CVD Method for Electrochemical Applications; China Association of Inventions, President IFIA, A. Wrzyszczyński
3. Genius Medal for the Invention "Diamond Electrodes Produced by HF CVD Method for Electrochemical Applications"; The Association of Hungarian Inventors; A. Wrzyszczyński
4. 2<sup>nd</sup> place for the best poster presentation; 7<sup>th</sup> GLOBAL WPC and NATURAL FIBRE COMPOSITES CONGRESS AND EXHIBITION, Kassel, J. Tomaszewska, St. Zajchowski.

#### 2007

1. Distinction at the Gordon Research Conference Photochemistry, Steacie Institute for Molecular Sciences, National Research Council, Canada, J. Pączkowski's team
2. The Kujawsko-Pomorskie Voivodeship Marshal Award for research-implementation work, prof. Jerzy Gaca
3. Ordered research project "Management and development of technical application of waste from polymer plastics in Poland", J. Tomaszewska, S. Zajchowski.

#### 2006

1. Gold Medal at the 2006 Nano Europe Science Conference and Fair, San Gallen, Switzerland, for "Improvement of mechanical and electrical properties of poly(vinyl chloride) nanocomposites with multi wall carbon nanotubes" presentation of Kazimierz Piszczek, PhD and co-authors
2. Publication CHEM.REV. IF= 20.233. B. Ośmiałowski, R. Gawinecki.

The team of Professor Wojciech Weiner and Wojciech Korpala has been awarded gold medals also in 1999 and 2001 at the "Eureka" World Fair of Invention, Scientific Studies and New Techniques in Brussels. Prof. Marek Wójcik, PhD, Eng. was designated by the Committee of Scientific Studies as Poland's representative for the Management Committee for COST Action 840 of the European Commission "Bioencapsulation: Innovation and Technologies".

A couple of years ago the California company Investigen, Inc. has turned to professor Jerzy Pączkowski with the request of consulting services regarding the development of a fast photochemical method of differentiating natural products from products with a modified genetic code. Professor Jerzy Pączkowski started negotiations over the agreement; one of its parties became also the Technical-Agricultural Academy. The agreement was signed on August 14, 2006. As part of the agreement, the Technical-Agricultural Academy has provided access to its scientific-technical database, necessary for conducting studies on the issue detailed in the agreement. Investigen, Inc undertook to cover all costs of tests and to finance a post-doctoral scholarship. The signed agreement was probably the first agreement of this type in the history of the Technical-Agricultural Academy. Currently, the agreement is still being realized in the field of photochemical methods of identifying genetically modified and unmodified natural products, and the results were submitted in the American patent office as a joint invention.

In the second half of 2006, the online version of the Dyes and Pigments magazine published a paper by Beata Jędrzejewska, Janina Kabatc and Jerzy Pączkowski, titled: *Dichromophoric Hemicyanine Dyes. Synthesis and Spectroscopic Investigation*. This would not be anything unusual, were it not for the fact that it was the 100<sup>th</sup> publication co-authored by Professor Jerzy Pączkowski, published in a magazine listed in the *Science Citation Index* (list of magazines with an *Impact Factor*).

### Academic life

Like at other faculties, students of the Faculty of Technology and Chemical Engineering may partake in the academic life of local authority, as well as scientific, sports and artistic organizations, etc.

Three student clubs function at the Faculty: The Chemistry Club, the Environmental Protection Club and the Chemical IT Club. Members of the Chemical Club prepare presentations for high school students during the Open Days of the University of Technology and Natural Sciences. Because of their spectacular character, the student presentations are always widely popular among pupils. Students and club members also take part in conferences, e.g. the 14<sup>th</sup> International Conference of Science Clubs in Wrocław, where they showed a work titled "Recycling of wrapping foils from PVC" and were awarded 3<sup>rd</sup> place in a thematic group (2009); the 1<sup>st</sup> Inter-university Seminar of Student Science Clubs on the subject of "Exact and natural sciences in the academic environment" at the PWSZ in Gniezno (2010); 2<sup>nd</sup> Congress of Student Science Clubs of Bydgoszcz Universities, titled "Student for the City and Region", UKW Bydgoszcz (2010). They participate in exhibitions: PLASTPOL 14<sup>th</sup> International Fair of Plastics Processing, Kielce 2010, Polagra in Poznań, Poleko in Poznań, and others. Students also actively participate in projects, e.g.: chemistry presentations for middle school pupils in the Kujawsko-Pomorskie voivodeship as part of the project titled "Hand in hand with Einstein", 1<sup>st</sup> and 2<sup>nd</sup> edition; organization of a summer school for middle school pupils as part of the "Hand in hand with Einstein" project, 2<sup>nd</sup> edition; presentations of "interesting chemistry" for pupils as part of the cooperation with Family Park in Bydgoszcz; presentations at the 2010 "Get the Science Bug" Bydgoszcz Festival of Science.

Apart from studying, a permanent part of the Faculty's life are student parties organized during the Juvenalia student festival. For years, the Juvenalia festival at our Faculty starts with the "Race for the Dean's cup", which always gathers approx. 100-150 participants,

not only from the University of Technology and Natural Sciences. Apart from the students, also employees of the Faculty take part in the race. Each year, the participants receive an occasional T-shirt commemorating this event, and the winners receive cups. Traditionally, on that same day, in the evening students and employees party together at a shared bonfire at the site of the faculty park. The "Festival of Translated Song" has also become very popular; it gathers many participants from various faculties, as well as a large audience which has great fun together with the performers taking part in the competition.

The report used also materials prepared by Bernard Torzewski, Ph.D.(Eng), and † Wojciech Korpala, (Ph.D., Eng), Professor of the University of Technology and Natural Sciences.

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