

Tehnološko-metalurški fakultet Univerziteta u Beogradu - sto godina znanja, istraživanja i akademske tradicije

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Ovaj tekst napisan je u želji da se, povodom jubileja, podsetimo ključnih događaja i ljudi koji su oblikovali Fakultet, kao i da izrazimo zahvalnost generacijama profesora, saradnika i studenata čije znanje, rad i vizija već sto godina stvaraju Tehnološko-metalurški fakultet Univerziteta u Beogradu.

Ključne reči: sto godina postojanja Tehnološko-metalurškog fakulteta; razvoj nastave hemijske tehnologije; doprinos nauci.

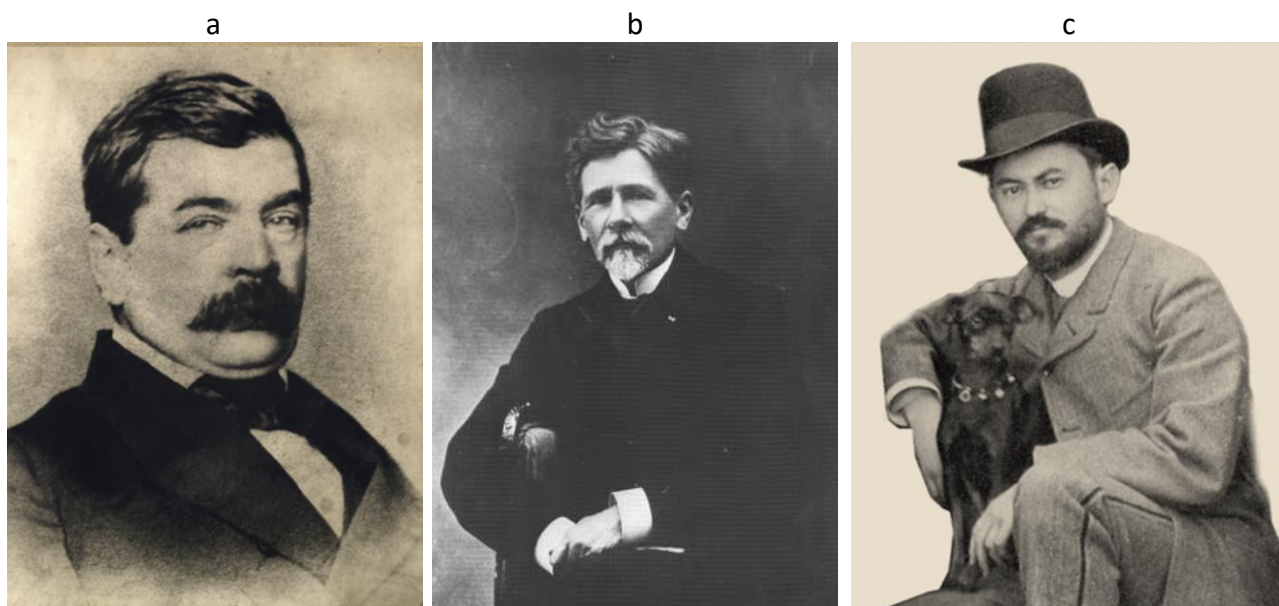
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Povod za ovaj kratak osvrt na početke i razvoj nastave tehnologije i metalurgije, kao i na dostignuća nastavnika i saradnika Tehnološko-metalurškog fakulteta, jeste izuzetno važan jubilej – 100 godina od osnivanja samostalnog Tehnološkog odseka Tehničkog fakulteta Univerziteta u Beogradu. Zvanični dokument o njegovom osnivanju potpisan je 16. novembra 1925. godine, te se taj datum smatra danom utemeljenja današnjeg Tehnološko-metalurškog fakulteta.

Pripreme za razvoj nastave iz ovih oblasti počele su mnogo ranije, zahvaljujući malobrojnim pojedincima i vizionarima koji su prepoznali značaj hemije, hemijske tehnologije i metalurgije. Jedan od njih bio je Mihailo Rašković (Slika 1a), prvi profesor hemije i tehnologije na Liceju, jedinoj visokoškolskoj ustanovi u tadašnjoj Srbiji. On je još 1853. godine držao predavanja iz ovih oblasti, uprkos tome što u nerazvijenoj zemlji gotovo da nije postojala hemijska industrija, već svega nekoliko pivara, fabrika sapuna, tekstila, šećerana, špiritana i mlinova (Slika 2).



Slika 1. a) Mihailo Rašković – prvi profesor hemijske tehnologije i autoritet svog vremena; b) prof. Sima Lozanić – autor prvih udžbenika iz tehnologije; c) Todor – Toša Selesković – profesor na Katedri za mehaničku tehnologiju i poznati konstruktor

Figure 1. a) Prof. Mihailo Rašković – the first professor of chemical technology and an authority of his time; b) prof. Sima Lozanić - author of the first textbooks on chemical technology; c) Todor - Toša Selesković - professor at the Department of Mechanical Technology and a well-known engineer and designer

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Slika 2. Nastava tehnologije od Liceja do Tehnološkog odseka Tehničkog fakulteta

Figure 2. Teaching of technology from the Lyceum to the Technological Department of the Technical Faculty

Zakonom iz 1863. godine Licej je postao Velika škola sa tri fakulteta, Filozofskim, Tehničkim i Pravničkim, pri čemu su predmeti hemija i hemijska tehnologija pripala Tehničkom fakultetu. Te iste godine formirana je i Katedra za hemiju i hemijsku tehnologiju. Od 1872. godine nastavu preuzima profesor Sima Lozanić (Slika 1b), autor prvog udžbenika iz hemijske tehnologije, koji je bio podeljen na četiri knjige: O vodi i gorivu (1887. g.), Osnovi metalurgije (1887. g.), Staklo, keramika, kreč, cement, gips (1892. g.) i Hemijski proizvodi (1894. g.).

Nove promene usledile su 1894. godine, kada je na zahtev Tehničkog fakulteta osnovana zasebna Katedra za hemijsku tehnologiju i Katedra za mehaničku tehnologiju, na čelu sa Todorom Seleskovićem (Slika 1c), poznatim konstruktorom i projektantom. Podignuti su objekti po njegovim projektima, kao što su barutana u Obilićevu kod Kruševca, parni mlin u Kragujevcu, Keramička fabrika, a posebno je značajan njegov doprinos razvoju Topolovnice u Kragujevcu.

Zakonom iz 1905. godine Velika škola postaje Univerzitet, a na Tehničkom fakultetu predaju se brojni hemijski i tehnološki predmeti. Nastava je u potpunosti obustavljena tokom Prvog svetskog rata, a obnovljena 1919. godine. Zbog velikog značaja hemije i tehnoloških disciplina, 1920. g. formira se Tehnološka grupa pri Mašinskom odseku, a 1923. g. uvodi se i tehnološki smer, čime je načinjen ključni korak ka kasnijem osnivanju samostalnog odseka 1925. g. i fakulteta 1948. godine (Slika 3).

Drugi svetski rat ponovo prekida rad Univerziteta, da bi se nastava obnovila u novembru 1945. Reorganizacijom Univerziteta 1948. godine, Tehnički fakultet prerasta u Tehničku veliku školu, a njegovi odseci postaju samostalni fakulteti. Za prvog dekana Tehnološkog fakulteta imenovan je profesor Panta S. Tutundžić (Slika 4), jedan od najzaslužnijih za izgradnju današnje zgrade Fakulteta. Njegova izuzetna dostignuća u oblasti fizičke i elektrohemije priznala je Srpska akademija nauka i umetnosti izborom za dopisnog člana 1958. godine, a za redovnog člana 1961. godine. U čast svog prvog dekana, Fakultet danas najboljim studentima dodeljuje nagradu koja nosi njegovo ime.

Iako je nastava tehnologije od početka obuhvatala i metalurgiju, Metalurški odsek zvanično je osnovan 1949. godine, a Fakultet je 1966. godine dobio naziv Tehnološko-metalurški fakultet.

Tokom jednog veka postojanja, profesori Fakulteta ostavili su trajan trag u razvoju Univerziteta: profesori Rajko Vračar i Ivanka Popović obavljali su funkcije rektora i prorektora, dok su prorektori bili i profesori Panta Tutundžić, Dragomir Malić, Slobodan Radosavljević i Dušan Vučurović.



Slika 3. Od Tehnološkog odseka Tehničkog fakulteta do Tehnološko-metalurškog fakulteta

Figure 3. From the Technological Department of the Technical Faculty to the Faculty of Technology and Metallurgy



Slika 4. Profesor Panta S Tutundžić - prvi dekan Tehnološko-metalurškog fakulteta

Figure 4. Professor Panta S Tutundžić - the first dean of the Faculty of Technology and Metallurgy

Fakultet su činile generacije studenata, od prvih 15 upisanih 1925. godine do rekordnih 791 studenta 1980. godine (Slika 5). Danas Fakultet ima oko 1600 studenata na osnovnim studijama. Od osnivanja do danas diplomiralo je preko 12.000, master ili magistarske studije završilo je više od 2.500, a doktoriralo preko 1.000 studenata. Broj nastavnika i saradnika rastao je od 3 (1925. g.), preko 20 (1948. g.), 190 (1980. g.), dok ih danas Fakultet ima 105. Nastava se odvija kroz 17 studijskih programa na svim nivoima studija.



Slika 5. Broj studenata i zaposlenih kroz vreme

Figure 5. Number of students and employees over time

Pored obrazovanja inženjera, profesori i saradnici Fakulteta decenijama su doprinosili privredi i nauci. Još 1946. profesor Panta S. Tutundžić pisao je o značaju naučnog rada za obnovu hemijske industrije, naglašavajući da se održivi razvoj industrije ne može ostvariti bez stalnog naučnog napretka.

U periodu od 1961. do 1971. g. Fakultet je, iako tada formalno neregistrovan kao istraživačka ustanova, ostvario preko 300 studija, elaborata i патената за привреду. Godine 1973. Fakultet je zvanično registrovan kao naučno-istraživačka organizacija. Danas je saradnja sa privredom usmerena na optimizaciju procesa, razvoj novih tehnologija i stručnu podršku industriji, dok se naučni rad potvrđuje objavljivanjem radova u vodećim nacionalnim i međunarodnim časopisima. Nastavnici Fakulteta doprinose pozicioniranju Univerziteta u Beogradu na ARWU listi, a neki se nalaze i na Stanfordovoj listi najuticajnijih naučnika sveta.

Srećni smo i ponosni što ove godine obeležavamo 100 godina rada Tehnološko-metalurškog fakulteta Univerziteta u Beogradu i nadamo se da ćemo i dalje, u duhu vek duge tradicije i kao neizostavan činilac razvoja celokupnog društva, nastaviti da dajemo doprinos u obrazovanju mladih inženjera i naučnika u oblastima hemijskih i srodnih tehnologija i metalurgije.

Faculty of Technology and Metallurgy, University of Belgrade

A century of knowledge, research and academic tradition

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(Book and Event Review)

This brief reflection on the beginnings and growth of education in technology and metallurgy, as well as on the achievements of the professors and researchers of the Faculty of Technology and Metallurgy, marks an important milestone: the 100th anniversary of the establishment of the independent Department of Technology within the Technical Faculty of the University of Belgrade. The official founding document was signed on November 16, 1925, a date celebrated as the birth of today's Faculty of Technology and Metallurgy University of Belgrade.

Keywords: 100th anniversary of the Faculty of Technology and Metallurgy; history of chemical technology teaching; contribution to science

Preparations for education in these fields began much earlier, when a handful of visionary scholars recognized the importance of chemistry, chemical technology, and metallurgy. One of them was Mihailo Rašković (Figure 1a), the first professor of chemistry and technology at the Liceum, the only institution of higher education in Serbia at the time, who began lecturing as early as 1853, despite the fact that the country had virtually no chemical industry, save for a few breweries, soap factories, textile plants, sugar refineries, distilleries, and mills (Figure 2).

The 1863 Law transformed the Liceum into the Great School with three faculties: Philosophical, Technical, and Law, assigning chemistry and chemical technology to the Technical Faculty, where the Department of Chemistry and Chemical Technology was established the same year. In 1872, Professor Sima Lozanić (Figure 1b) assumed responsibility for teaching chemistry and chemical technology. He later authored the first textbook on chemical technology, published in four parts between 1887 and 1894.

Significant changes occurred in 1894 with the establishment of a separate Department of Chemical Technology and a new Department of Mechanical Technology led by Todor Selesković (Figure 1c), a well-known engineer and designer. Several industrial facilities were built according to his designs, including the gunpowder factory in Obilićevo near Kruševac and the steam mill in Kragujevac.

The Great School became the University of Belgrade in 1905, where chemistry and technology courses continued to expand. Teaching was completely suspended during World War I and resumed only in 1919. Given the growing importance of these disciplines, the Technological Group was formed in 1920 within the Mechanical Department, and by 1923 the technological track became an official study path, paving the way for the creation of the independent department in 1925 and, later, the Faculty in 1948 (Figure 3).

World War II again interrupted university activities until November 1945. The 1948 reorganization of the University formed the Technical High School, and former departments became independent faculties. The first Dean of the newly established Faculty of Technology was Professor Panta S. Tutundžić (Figure 4), who played a crucial role in the obtaining of the Faculty's current building. His achievements in physical and electrochemistry earned him membership in the Serbian Academy of Sciences and Arts (SASA) in 1958 and full membership in 1961. Today, the Faculty honours his legacy by awarding a student prize that bears his name.

Although teaching in technology had always included metallurgy, the Department of Metallurgy was officially established in 1949, and in 1966 the Faculty adopted the name it carries today, the Faculty of Technology and Metallurgy.

Throughout its century-long history, the Faculty's professors have made a profound impact on the University of Belgrade. Professors Rajko Vračar and Ivanka Popović served as Rectors and Vice-Rectors, while Professors Panta Tutundžić, Dragomir Malić, Slobodan Radosavljević, and Dušan Vučurović also held Vice-Rector positions.

The Faculty has always been defined by its students. Their numbers grew from the initial 15 enrolled in 1925 to a peak of 791 first-year students in 1980 (Figure 5). Today, the Faculty has around 1,600 undergraduate students. Since its founding, more than 12,000 students have graduated, over 2,500 have earned master's degrees, and more than

1,000 have completed doctoral studies. The number of professors and researchers also evolved, from 3 in 1925, to 20 in 1948, to 190 in 1980, while today the Faculty employs 105 academic staff members. Teaching is organized across 17 academic programs at all study levels.

Beyond educating generations of engineers, the Faculty's professors and researchers have played a vital role in industrial development and scientific advancement. In 1946, Professor Panta S. Tutundžić wrote about the importance of scientific work for rebuilding the chemical industry, arguing that sustainable industrial progress is impossible without continuous investment in research and expertise.

Between 1961 and 1971, although not yet formally registered as a research institution, the Faculty completed over 300 studies, reports, and patents for industry. It became an officially recognized research institution in 1973. Today, the Faculty's collaboration with industry focuses on process optimization, technology development, and technical consulting, while its scientific output appears in leading national and international journals. The Faculty significantly contributes to the University of Belgrade's ranking in ARWU fields and proudly has professors among Stanford's list of the world's most influential scientists.

This text is written in honour of the Faculty's centennial, to remember the key events and individuals that shaped its history, and to express gratitude to the generations of professors, researchers, and students whose dedication, expertise, and vision built the Faculty of Technology and Metallurgy over the past hundred years.