



# Petru Poni - a Model of Leadership, Integrity and Tenacity

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**Abstract:** *The article recalls the big personality of Petru Poni, one of the Romanian pioneers of the research in chemistry. The evocation is realized from the perspective of his contribution in the development of education in the second part of the 19<sup>th</sup> century as it is reflected mainly in his memoirs “What I wanted to do”. The achievement of the objectives of his life did not have a smooth path. However, his willingness to learn, the choice of action instead of resemnation and the purpose to do something meaningful in his life brought him to accomplishment.*

**Keywords:** *Petru Poni, chemistry at Iasi, “Petru Poni” Institute of Macromolecular Chemistry Iasi*

## 1. Introduction

A throughout incursion in the life of Petru Poni, as it is recounted in the published documents by people that have known him or have spent long time investigating the records of the Petru Poni's family found at The Local Archives of Iași, let the impression that all have been said about this huge personality [1-8]. Nonetheless, somebody who is focused only on science in the professional life will be surprised to find out so many facets of his career: chemist, professor and active politician, very much involved in the destiny of the country. He was not at all the scientist secluded in his laboratory, away from the vortex of life; on the contrary, he has built laboratories.

The most captivating documents are his memoirs: *What I wanted to achieve* [9-17]. They were written three years before his death (1922), the moment in time when he was most probably sufficiently detached to narrate objectively the meaningful steps of his existence.

When his life is described in bullet points' style, the reader gets the impression that his achievements were painless. His memoirs certify that he had to go over a lot of hurdles and sometimes succeeded due to his determination, choosing to act instead of surrendering or deciding on withdrawal when his values were overlooked. This short article is to remind few crucial moments of his life, in which giving up was not an option for Petru Poni.

## 2. The most important facts of Poni's life

Petru Poni was born on the 4<sup>th</sup> of January 1841 in the Săcărești village, located not far away from Târgu Frumos, in the county of Iași (Figure 1). His education began in the form of elementary school in Târgu Frumos [18] and continued at the Academy in Iași, how it was called those days the very famous National College. There is a mention that he attended afterwards, for some time, courses of law at the university [1]. Petru Poni mentioned in his memoirs only the year spent at the university, with no other specification [12].

As a particularity, in the second half of the 19<sup>th</sup> century the studies in Occident of Romanian rising generation represented the best way for education in science, law or arts. The graduation from an occidental university granted them the authority in a specific field and the recognition in society [19].

In these circumstances, Petru Poni obtained “*in 1859, after gymnasium graduation and the first year at the university*” a scholarship for specialization in physics and chemistry. Along with other aspirants to knowledge from Iași and Bucharest (Gheorghe Cernătescu, Alexandru Odescu, Dimitrie Sergiu, Grigore Ștefănescu, Grigore Păucescu) [17], he left for Paris, to enroll at Sorbona for studies. Sometime after homecoming (1866), he started to teach physics and chemistry at his former gymnasium (Academia Mihăileană) and at the Military School in Iași.

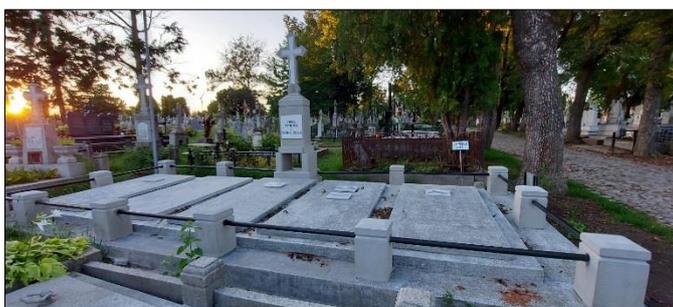
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**Figure 1.** The picture of Petru Poni found at the Romanian Academy, Iași Branch (left) and Săcărești village and its environments in August 2021 (right)

He was very committed to the education of pupils and he elaborated the first manuals of elementary chemistry and physics.

In 1878, after passing a rigorous examination, Petru Poni got the position of professor at the University of Iași, at 37 years old. Very convinced that “*chemistry is eminently an experimental science*”, he succeeded in organizing an appropriate laboratory for students and his own research. In 1879 he became member of the Romanian Academy (scientific section), of which he was president two times (1898-1901, 1916-1920). Being very active in the public life, he was engaged in politics, as independent or member of the Liberal Party: deputy, senator, minister of Religious Affairs and Education (July 21 - November 26, 1891; October 4, 1895 - November 21, 1896; October 24 - November 29, 1918), mayor of Iași (1907, 1922) [20].



**Figure 2.** The grave of Petru Poni's family (Eternitatea cemetery, Iași, August 2021)

He passed away on the 2<sup>nd</sup> of April 1925 and his grave is found at Eternitatea cemetery in Iași (Figure 2).

### 3. Decisive moments throughout Petru Poni's educational career

#### The gymnasium years

According to the title of his memoirs, from a very young age he knew exactly his objective in life: “*to continue to learn in order to become a person*”. After the primary school he introduced himself to the principal of the gymnasium (August Treboniu Laurian) and told him about his aspiration. After a short *ad-hoc* evaluation (arithmetic, grammar), he was accepted in the first class of gymnasium, as a boarding-school pupil. This was one of the happiest moments of his life, as he admitted: “*The joyful moments are never forgotten in life. Even now, at the old age I have in my mind the words of Laurian*”. The gymnasium teachers became his mentors (Simion Bărnuțiu, Grigore Cuza, the priest Isaia Duhu):



“The pupils listened to them with respect and asked themselves how is it possible that people with such a simple look to be so much educated” [12]. The evocation of those years shows that Poni really enjoyed learning. The qualities -as a future professor- have been acquired during gymnasium. He noticed and admired the pedagogical methods of his teachers. Most likely he was that kind of graduate with a wide general knowledge and a high level of intelligence, which is capable to continue with the university education in various fields. The first year at the Law School is evidence.

### At Sorbonne, Paris, France

Eventually, he left enthusiastically for Paris to study chemistry and physics at Sorbonne: “We were going to acquire the knowledge, in so many special disciplines, in order to apply it in our homeland.” However, Petru Poni was not so enthusiastic about the science education at Sorbonne. Highly esteemed professors gave lectures and classes, however only for popularization, not as high-level science: “I have learned myself a lot from those lectures; but not the science as a whole and not even what was needed for my essential exams”. In these circumstances he was constrained to find in other places the education that he expected. At his own expense, he attended at College de France the lectures of Marcellin Berthelot (organic chemistry) and Victor Regnault (measurement methods in physics), at Jardin des plantes the courses of Gabriel Daubr e (minerals and rocks). He had acquainted with practical work in the laboratory and performed experiments at Saint-Louis College (physics), at Jardin des plantes (mineralogy) and in the private laboratory of Felix Pisani (chemistry). He was convinced that without practical work he would never become physicist, chemist or mineralogist.

### The return home with audacious long-term projects

Petru Poni came back to Romania with the determination to apply for the position of professor at the University of Iai, to elaborate a chemistry course and, the most important, to organize a laboratory for the practical experiments of students and his own researches. Regarding the last ones, he had already in mind the plan of his future investigations for which he had gathered the publications during his stay in France. However, his return happened during a very instable political situation (May 1864 - February 1866, during the regime of Alexandru Ioan Cuza). Despite the fact Poni followed all the stages in order to get the position, the contest did not occur anymore. “Who cares, in such circumstances, about the hapless chemist who just fight to do his job?” asked himself with sadness [13]. Besides this failure, the material needs have arisen: “I have been lived in Bucharest, for four months, in the deepest poverty”. After the establishment of the new government (February 1866), the new minister of Religious Affairs and Education (Constanti A. Rosetti) offered Poni the position of collegium teacher, in Iai. It was not what he wanted to do; however, he did not shrink back in front of difficulties and disappointments: “If I was not able to make science, at least I have been striving to do my duty for schoolboys”. He was very content to have a small laboratory for chemistry and physics at the Military School and did not shy away from hard work. His ingenuity helped him to manufacture those needed for the normal functioning of the laboratory: “I remembered the words of Berzelius - A chemist should know to file with a saw and to saw with a file”. The time spent at the Military School was a good period.

The research projects envisaged previously in France were not anymore possible, therefore Poni reoriented to something that was closer to his possibilities and, in the same time, not at all investigated before: the local minerals and mineral waters. This followed years of hiking and explorations in the mountains from the region of Moldavia and the east part of Transylvania; it was also a good opportunity to observe the people of those places [21].

### Professor at the University of Iai

“At last, in 1878, after 13 years of waiting, the position of chemistry professor at the University of Iasi was open”, noted Petru Poni in his memoirs [13]. This was the reason why he had been working so hard. There was the possibility to get the chemistry chair without contest, due to his already published papers. With his strong upright nature, he did not want to make use of this right. After passing the examination

in Bucharest, Petru Poni became finally professor at the University of Iași. As chemistry was for him, first of all, an experimental science, the organization of the laboratory was on the top of to do list. Those years, the University of Iași was situated in the building of the current Faculty of Medicine.

Again, with the specific aim of developing the laboratory for students and for research, a period of insistent claims to the university council followed. The endeavour had a good outcome: the financing for the endowment of the laboratory was increased step by step and two more rooms were added to the existing ones. He was pleased for his achievements: *“Through hard work, perseverance and patience I managed to do at the small University of Iași what I could not have even at the Sorbonne”* [14].

Two more actions of Petru Poni at the university should be put forward to complete the portrait of his personality as a school builder.

Thanks to his close relationship with Dimitrie A. Sturdza, member of the I.C. Bratianu III cabinet, he managed to impede the government from closing down the Medical School of Iași, in 1884, by writing a reliable report in this regard [14]. His forward-looking endeavor in the direction of organizing the superior education in the form of strong university centers, as opposed to isolated faculties, was the result of his profound knowledge of the academic system in Europe, mainly in France.

Moreover, Poni persuaded Sturdza - who has become in the meantime the minister of the Religious Affairs and Education (February 1885 - March 1888) - of the necessity of a new building for the university. After obtaining the financing, he traveled abroad to visit the new universities, to analyze all the constructing details, plans and organization. He realized that the approved budget did not allow planning something similar, therefore he took a wise decision, instead of asking for more: *“I decided to evaluate what is possible to do with the budget that I already have. Otherwise I could have lost even what I already had”* [15]. In the coming years he engaged to the best of his ability in the construction of the new building of the university, on Carol Street. In the fall of the year 1898 the relocation of the University of Iași in the new building took place.

#### 4. “Petru Poni” Institute of Macromolecular Chemistry

Petru Poni’s biggest regret, after visiting the big universities in Europe, was that the financing for the new university in Iași was not enough to retrieve their pattern, i.e., the existence of a separate institute for each experimental science.



**Figure 3.** “Petru Poni” Institute of Macromolecular Chemistry, Iași, Romania

In 1949, his nephew, Radu Cernătescu (the son of his daughter Elena [18]), constituted a chemistry research group, at the Iași Branch of Romanian Academy and initiated the construction of a new building [22, 23]. The institute that is named after Petru Poni (Figure 3) is one more testament that his efforts have paid off.

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