



Croatian Microscopy Society 1983-2022

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Abbreviations

CESEM – Committee of European Societies for Electron Microscopy

EMS – European Microscopy Society

HMD – Croatian Microscopy Society

HPD – Croatian Society of Natural Sciences

HDEM – Croatian Society for Electron Microscopy

IFSEM – International Federation of Societies for Microscopy

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Abstract

This paper provides a brief overview of the history of the Croatian Microscopy Society on the occasion of its 30th anniversary as an independent society and the 40th anniversary of its foundation. The overview chronologically details the period of the Society's work as the Section for Electron Microscopy of the Croatian Natural Science Society (1983-1992), followed by its independent activity first as the Croatian Society for Electron Microscopy (1992-2006) and finally as the Croatian Microscopy Society (2006-present). The review concludes with recent trends and policies in the Society's development. The review is an extended excerpt from the opening speech held by the Chair of the 4th Croatian Microscopy Congress and a member of the Society's board, on the occasion of the Society's anniversary, May 18th 2022.

FOUNDATION AND THE FIRST DECADE OF THE SOCIETY (1983-1992)

The Croatian Microscopy Society started its work as the **Section for Electron Microscopy of the Croatian Society of Natural Sciences** (HPD) in the autumn of 1983 at the instigation of **Prof. Zvonimir Devidé**, who was also elected first Head of the Section. The task of the Section was to gather scientists and experts of all professions who use microscopic methods in their research and work, especially those involved in electron microscopy.

The Section's activities took place through regular lectures, colloquia, seminars, and symposia. Initially, the meetings were held at the HPD premises at Ilica 16 in Zagreb. The first regular meeting of the Section was held on November 20th, 1984, and 13 members were present (Figure 1).

The keeper of the minutes of this meeting, **Alenka Hloušek-Radojčić**, now a professor at the University of Delaware in the USA, remembers that day:

It was cold and cloudy. As a novice from a non-scientific family, membership in a scientific society was a great honour for me. As much as the academic world and science attracted me, they also scared me. Being involved in the Section for Electron Microscopy work helped me because it allowed me to learn about the world of scientists outside the laboratory walls.

Although the interest and the need to establish the Society existed years before, it took a long time to develop the Society, Prof. Devidé explains:

I had no desire to start the Society for Electron Microscopy because I saw many people who were only interested in using the instrument or were just

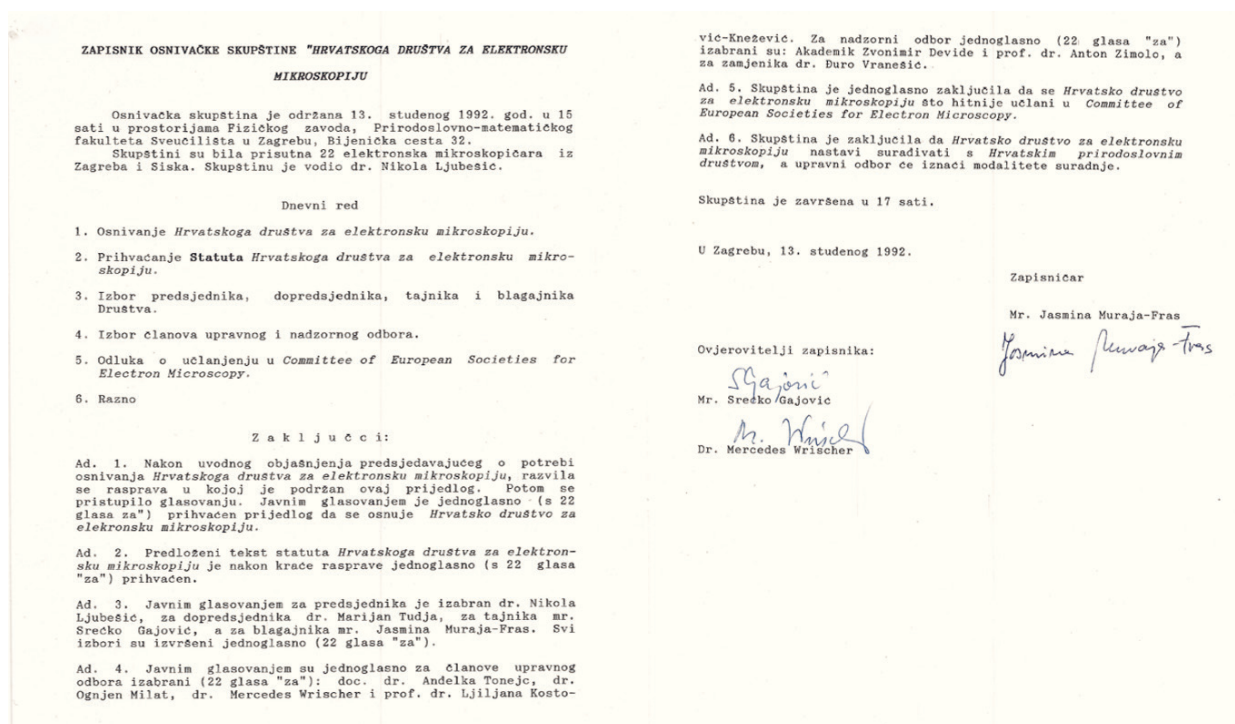


Figure 1. Excerpt from the Minutes of the Section's Founding Assembly.

looking at it. Even fewer, if any, were interested in sitting down at the instrument and struggling (read: properly working in the field). That's why, to be honest, I did not want a Society. But it was an imperative at the time; everything was socialized, and everything had to follow certain principles. And so, under this pressure, because other cities, such as Belgrade and Ljubljana, had their societies, we had to establish our own.

(Monograph "Electron Microscopy in Croatia", Dragutin Bauman and Srećko Gajović, 2012)

Prof. Nikola Ljubešić, former president and active member of the Society, recalls:

It is hard to say how it started. There was a constant need to establish a society, an organization that would gather the knowledge about microscopy. The idea itself appeared much earlier, but prof. Devidić said: "Let's not go too fast; let's go slowly." Perhaps he was right. He looked at it more broadly, and from the point of view that electron microscopy does not encompass only one profession but several. Then he got the idea that it would be good for the Society to work within the framework of the HPD, Croatia's oldest and most multidisciplinary society. This way, the Section could be multidisciplinary and operate without favouring certain professions. This is how the Section for Electron Microscopy within the HPD was formed.

The Section was organized into four Units according to the field of scientific activity: Raster electron microscopy, Materials, Biomedicine, and Cytology. At that time, the

Section had 40 members. The policy of the Section was that all individuals using electron-microscopy techniques in their research or professional work, including technicians and laboratory workers, could become members of the Section. The Section soon became part of the Association of Societies for Electron Microscopy of Yugoslavia.

During that period, the Section was led first by **Prof. Zvonimir Devidić** (1983-1989) and then by **Prof. Nikola Ljubešić** (1989-1994). One of the most important events of that time was the 5th Yugoslav Symposium on Electron Microscopy, which the Section organized in Plitvice in May 1986.

At that time, all Yugoslav microscopists and distinguished guests from abroad gathered. This was the first appearance of Croatian electron microscopy on the world microscopy stage, Prof. Ljubešić recalls. I believe that the Society has played an essential role in the progress of microscopy in Croatia. The Society's activities have become very extensive over time. First within Zagreb and Croatia, and then abroad. This was something positive, and the multidisciplinary helped us a lot. We had regular and well-attended meetings in the Society. Very different people came to us, members of the Society and those from outside, which contributed to people starting to understand what microscopy is.

This social component always gave the Society a kind of warm "family" feel. From the very beginning, members of the Society enjoyed meeting and socializing, which always contributed to connections, collaborations, and

new ideas. There were good patisseries and cafes nearby, which everyone remembers fondly.

When the Croatian War of Independence broke out in 1991, the old building at Ilica 16, with its shelter in the basement, provided a safe space for the Society's activities. It is important to point out that even during those difficult war years, meetings and research presentations were held regularly. However, this period also brought its constraints.

INDEPENDENCE – CROATIAN SOCIETY FOR ELECTRON MICROSCOPY (1992-2006)

In 1992, after the disintegration of Yugoslavia, when Croatia became independent, the Section became independent and was renamed the **Croatian Society for Electron Microscopy** (HDEM). At the founding assembly on November 13th, 1992, **Prof. Nikola Ljubešić** was unanimously elected president. The 22 members of the Society accepted the proposed text of the Society's Statute. In the same year, **Prof. Zvonimir Devidé** and **Prof. Mercedes Wrischer** were declared honorary members of the Society for their special merits in developing electron microscopy and the Society.

In the following years, the Society was led by: **Ognjen Milat, Ph.D.** (1994-1997), **Đuro Vranešić, Ph.D.** (1998-2004), **Prof. Srećko Gajović** (2005-2011), **Prof. Nenad Tomašić** (2012), **Prof. Igor Weber**, (2013-2016), **Andreja Gajović, Ph.D.** (2017-2020), and the current president is **Suzana Šegota, Ph.D.**

Since 1994, HDEM has been a member of the **European Microscopy Society** (EMS) - the former **Committee of European Societies for Electron Microscopy** (CESEM). In 1998 it became a full member of the **International Federation of Societies for Microscopy** (IFSEM).

THE LOGOTYPE

It is worth mentioning that the Society's logotype (Figure 2), created by **Ognjen Milat, Ph.D.**, in 1995, has remained unchanged. The logo is a drawing composed of straight and wavy lines representing the radiation of photon and electron beams and spectra, shaped to represent the map of Croatia. The ellipse with a horizontal line in the middle represents the glass lens symbolising a microscope. For the full story on this logo, visit HMD's website.



Figure 2. *The logotype of Croatian Microscopy Society.*

THE CROATIAN MICROSCOPY SOCIETY (2006-PRESENT)

In 2006, with the intention of expanding its activities to the field of all types of microscopy, HDEM changed its name to **Croatian Microscopy Society** (HMD), following the recommendations of the European and global microscopists' associations, and has kept this name until today. The **HMD Declaration on the Promotion of Microscopy in Educational Content** was issued in the same year. The Declaration emphasized the multidisciplinary nature of microscopy and the necessity of top-quality training for microscopists. It aimed to encourage the connection of the practical application of microscopy with the educational process and the unification of the knowledge of Croatian experts in the education of new microscopists.

In 2007, the **Declaration on the Use of Capital Equipment** was published, which aimed to increase equipment utilization. It emphasized that all microscopes should be available to all potential users in Croatia. In the Declaration, the availability of microscopes was regulated by specific instructions.

In 2012, the first monograph was published by HMD, titled "**Electron microscopy in Croatia**" and written by **Dragutin Bauman, ing. chem.** and **Prof. Srećko Gajović.**

During this period, the HMD members did not only regularly participate in national and international meetings, but they organized them as well. Specifically, the **1st Congress of the Croatian Society for Electron Microscopy**, which was held in Zagreb in 1999. The Society then hosted a major international meeting, the **6th Multinational Congress on Microscopy**, held in Pula in 2003. A few years later, the **2nd Croatian Microscopy Congress** with international participation was organized in Topusko in 2006. In 2012, the Croatian Microscopy Symposium was held in Pula, followed by the **3rd Croatian Microscopy Congress**, with international participation in Zadar in 2015. The **17th International European Light Microscopy Initiative Meeting** (ELMI2017) was held in Dubrovnik in 2017. In the same year and for the second time in Croatia, the **13th Multinational Congress of Microscopy** (MCM2017) was held in Rovinj. All these events brought together many experts from all over the world, which was also confirmed at the most recent event, the **4th Croatian Microscopy Congress** with international participation, held in Poreč in 2022. The Society is also well known for its annual meetings, which are always held in different locations with microscopy equipment. This gives members the opportunity to socialize, take a free trip to Split or Rijeka, and, most importantly, learn more about the microscopy equipment available in Croatia.



Figure 3. The exhibition "From first to modern microscopes" dedicated to the history of Croatian microscopy.

PRESENT AND FUTURE

The Croatian Microscopy Society currently has 166 members. Monthly and annual meetings, workshops, and scientific-educational gatherings are held regularly throughout Croatia. From 2020, meetings were held both virtually and in hybrid formats. Special attention is paid to science communication in the field of microscopy and, subsequently, the availability of all information related to microscopes and microscopy on the HMD website.

New times bring new technologies and new ways of communication. The Society strives to be active on social networks like Facebook and Instagram and through the

program "MikroskopiJA na netu" (Microscopy Online) and its website, which is constantly updated and expanded with new microscopy data.

This is how the founders of HMD, from their perspective, view its work today:

HMD is not what it used to be, and that is perfectly fine. It shouldn't be. Young people have the strength to realize new ideas and provide new content, and that is what drives science forward. Society itself is doing well, and nothing fundamental should be changed. It made a huge step forward with the inclusion of different fields and in terms of membership numbers. Many people mean many new ideas, but we



Figure 4. The participants of the 4th Croatian Microscopy Congress held in Poreč, 2022.

must not forget that one of the essential elements of success is collaboration. Bringing together people who know very different techniques can help push science further. Cooperating as much as possible and helping each other is the key to personal and global progress.

We also asked them, "What would you say to today's young microscopists and students interested in microscopy?" Should they study microscopy and why?"

Everyone agreed on the following:

Yes! They should do microscopy. Microscopy definitely has a future. Today, the availability of methods is much greater, and it is necessary to use and combine as many methods as possible. But microscopy will always be something special.

Microscopes have fascinated generations of scientists and experts. The entire exhibition on the history of Croatian microscopy entitled "From the first to the modern microscopes" was dedicated to this fascination (Figure 3). It was organized on the occasion of the 30th anniversary of HMD as an independent society and presented

at the 4th Croatian Microscopy Congress (Figure 4), while its regular restating will take place at HMD's annual meetings.

This exhibition consists of six parts. The development of light and electron microscopy in Croatia is presented chronologically and thematically through the stories about microscopes and people, told through photography and the written word. The exhibition includes only a small part of the historical material and is the beginning of a larger project that HMD and the authors **Danijela Poljuha, Ph.D.**, **Mirela Uzelac, M.Sc.** and **Vida Strasser, Ph.D.** hope to realize in the future.

There is much more to tell. There are many messages and lessons that microscopy and its enthusiasts can convey. It is up to us to apply what we have learned and pass it on to future generations. If you are interested in microscopy and would like to contribute to its further development in Croatia, please contact HMD and join this society; your ideas and knowledge will be greatly appreciated.