

# **A Brief History of the Kapisanang Kimika Ng Pilipinas**

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## **ABSTRACT**

The community of chemists in the country developed from the graduates of the pharmacy program established in the University of Santo Tomas during the Spanish regime. The number of university-trained chemists increased during the American era, and eventually a formal organization of chemists, the Chemical Society of the Philippines, was established in 1937. The various aspects of the organization, from its By-Laws to its activities, during its 85 years of existence are reviewed in this paper.

**Keywords:** *chemical organization; history of chemistry*

## **INTRODUCTION**

The *Kapisanang Kimika ng Pilipinas* is the Chemical Society of the Philippines. It is the scientific organization in the Philippines that is concerned with the promotion and advancement of chemistry as a science, the engagement of chemical science in national development and the dissemination of chemical knowledge. It bands together chemists and members of related disciplines to interact in an atmosphere of scientific exchange and in the spirit of social fellowship.

Having been established in 1937 when the country was under American rule, the organization adopted an English name – *Chemical Society of the Philippines* (CSP). In 1971, it assumed a Filipino name – *Kapisanan ng mga Kimiko sa Pilipinas*, and since then was identified with this name and the acronym KKP<sup>1</sup>. The name was amended in 1997 to *Kapisanang Kimika ng Pilipinas* while retaining the same acronym KKP.

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<sup>1</sup> The KKP By-Laws of 1997 cites 1976 as the year when the name of the society was changed to *Kapisanan ng mga Kimiko sa Pilipinas*. However, this Filipino name was noted to first appear in the 1971 issues of *Chemists' Quarterly*, the official publication of the society.

As KKP celebrates its 85<sup>th</sup> anniversary this year, it is an opportune time to look back and review its efforts and accomplishments in fulfilling its mission. This paper documents the transitions that the organization underwent as the science of chemistry progressed in the country. It initially traces the beginnings of chemists in the country from the Spanish era to the American regime. It presents various aspects of the organization and the transformation that took place through the years.

## CHEMISTS IN THE SPANISH ERA

The first chemists in the country were actually pharmacists. Chemistry was introduced in the country as a science when a five-year program leading to the degree *Bachiller en Farmacia* was established in 1871 at the University of Santo Tomas, then known as the *Real Colégio de Santo Tomas*<sup>2</sup> (Rodriguez, 1954). The program included courses on theoretical and applied chemistry, such as general chemistry (*química general*), inorganic chemistry (*química inorgánica*), organic chemistry (*química orgánica*) and chemical analysis (*análisis químico*). Among the eminent graduates of this program were Anacleto del Rosario, who became director of the *Laboratorio Municipal de la ciudad de Manila* in 1888, and the patriot Antonio Luna, who was appointed as Professor of Chemistry of this laboratory in 1895 (Clemente, 1935).

A profession for chemical technicians developed in the 1890s when trade schools (*Escuela Práctica Profesional en Artes y Oficios*) were established and a two-year training program was offered leading to the title of *perito químico* (expert chemists) (Fox, 1976). This rise of technical or vocational education in the country followed a trend occurring in Europe at that period. These programs were established in the Manila School of Arts and Trades (*Escuela Práctica Profesional en Artes y Oficios de Manila*, 1890), the Iloilo School of Arts and Trades (*Escuela Práctica Profesional en Artes y Oficios de Iloilo*, 1891) and the Bacolor School of Arts and Trades (*Escuela Práctica Profesional en Artes y Oficios de Bacolor*, 1893).<sup>3</sup> Graduates of this program found employment in the laboratories of sugar centrals and in mining companies.

## FORMAL CHEMIST EDUCATION

Formal baccalaureate programs for chemistry were opened in the country during the American regime. The first undergraduate and graduate degree programs in chemistry were offered in 1913 at the University of the Philippines, which granted the degrees of Bachelor of Science in Chemistry and Master of Science, major in Chemistry (Valenzuela, 1954). In the succeeding decades, several universities with a pharmacy program expanded their offerings to include a chemistry baccalaureate program. Centro Escolar University<sup>4</sup> (formerly *Centro Escolar de Señoritas*, 1921), National University (formerly *Colegio Filipino*, 1921), Philippine Women's University (formerly Philippine Women's College, 1926), the University of Santo Tomas (1931)<sup>5</sup> and Silliman University (formerly named Silliman Institute, 1931) offered a four-year program leading to a Bachelor of Science in Chemistry degree (Valenzuela, 1954).

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<sup>2</sup> Elementary chemistry was taught as a required course in secondary or pre-college education (*segunda enseñanza*) in accordance with the Royal Decree of 1865 (Sanchez and Bass, 1929).

<sup>3</sup> These schools are the precursors of three technological universities in the country, viz., the Technological University of the Philippines in Manila, the Iloilo Science and Technology University in Iloilo and the Don Honorio Ventura Technological State University in Pampanga.

<sup>4</sup> The Centro Escolar University offered in the College of Pharmacy a special post-graduate course for the degree of Analytical Chemist (Lopez Rizal, 1934).

<sup>5</sup> The University of Santo Tomas opened in 1933 a graduate program leading to the degree of Master of Science in Chemistry (Villaroel, 2012).

A sugar chemistry program and an industrial chemistry program were established later at the Ateneo de Manila (now Ateneo de Manila University) in 1925 and at the Adamson School of Industrial Chemistry (now Adamson University) in 1932, respectively (Valenzuela, 1954). Some chemistry schools were opened in the 1930s, such as the Paterno School of Applied Chemistry and the Quisumbing School of Chemistry (Lopez Rizal, 1934).

The graduates of these programs filled the demand for chemists in laboratories of sugar mills, cement plants, distilleries, essential oil plants, general analytical laboratories, and other industries that were opened during the American regime (Valenzuela, 1954). Chemists were also employed in the research laboratories of government agencies, such as the Bureau of Science.

Some chemists in the government laboratories and professors in universities were granted by the American colonial government under the Pensionado Act of 1903 (Philippine Commission Act No. 854) fellowships to undertake training and further studies in the United States of America and in Europe (Valenzuela, 1954; Orosa, 2005). Known as *pensionados*, these scholars completed training and studies, and returned to the country to initiate research and advanced courses programs in chemistry.

## CREATION OF A SOCIETY OF CHEMISTS

The inception of a chemical society in the country followed the creation in 1933 of the National Research Council of the Philippine Islands (NRCP) through the Philippine Legislature Act No. 4120 (NRCP, 1934). The council was mandated to promote research in the mathematical, physical, and biological sciences and in the application of these sciences. It was composed of several divisions, one of which was the Division of Chemical and Pharmaceutical Sciences.

Some members of the NRCP realized the need for an organization that would focus on the chemical science – the growth, utilization and dissemination of chemical knowledge in the country (Natividad and Cosio, 1970). This organization would include chemists who are not members of the NRCP. They formed in 1935, the *Philippine Chemical Society*, which was composed of chemists and chemical engineers. However, in 1937, the chemical engineers separated from the organization<sup>6</sup>, and the remaining chemists founded the *Chemical Society of the Philippines* (CSP). The first president was Dr. Amando Clemente of the University of the Philippines who was elected in 1937 by the membership of about 200 chemists (Natividad and Cosio, 1970).

The society was active during its initial years, with the officers meeting twice a month to plan activities (Natividad and Cosio, 1970). It held scientific meetings to promote updated knowledge in chemistry among its members, and also organized social events to foster collegiality. However, the outbreak of World War II in the country disrupted these activities and the society lost some of its members as a result of hostile war operations. After the war, as the country started to rebuild itself, the CSP re-organized and resumed its activities.

## ORGANIZATION BY-LAWS

The CSP drew in 1937 its constitution and By-Laws where it declared the promotion and the advancement of chemistry in the country as its mission. It expressed a commitment of the society to the protection of the rights and interests of Filipino chemists, particularly in the presence of foreigners claiming to be chemists (Natividad and Cosio, 1970). It also declared the aim of CSP to

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<sup>6</sup> The chemical engineers formed in 1939 the Philippine Institute of Chemical Engineers (PICHE).

provide a venue for the technical and social interaction for its members, and to motivate students in pursuing studies in the field of chemistry.

In 1954, the CSP amended its By-Laws to adapt to changes brought about by the promulgation of the Chemistry Law. The By-Laws limited the regular membership to registered chemists and holders of graduate degrees in chemistry but allowed non-registered chemists and chemical technicians to be associate members (Natividad and Cosio, 1970). It made provisions for the organization of regional chapters and of student chapters, following the practice of the Philippine Pharmaceutical Association. In the same year, the organization registered with the Securities and Exchange Commission (SEC) to acquire a legal status as a non-stock and non-profit corporation.

In 1971, CSP adopted a Filipino name - *Kapisanan ng mga Kimiko sa Pilipinas* (KKP), which translates into English as the Society of Chemists in the Philippines, implying the possible membership of non-Filipinos. The society formalized this change of name, filing a new SEC registration in 1976 using the new Filipino name (CSP, 1970).

The By-Laws were revised in 1997 to change the name of the society into *Kapisanang Kimika ng Pilipinas*, while retaining the acronym KKP (KKP, 1997). The new name is a direct translation of the English name. This amendment was made to address some difficulties in SEC registration. It was also undertaken to delineate the focus of the society on chemistry as a science, leaving concerns related to the practice of chemistry as a profession to another chemistry organization, the Integrated Chemists of the Philippines.<sup>7</sup> The revised By-Laws expanded regular membership to include registered and unregistered chemists, as well as graduates of allied disciplines and chemistry students. It provided for the formation of divisions according to the branches of chemistry or common research and professional interests.

The By-Laws assigned the highest position in the society to a president, who exercises general supervision over the affairs of the society. Through the years, the elected president came from the academe, industry, and government. Table 1 lists the names of the CSP / KKP presidents from 1937 to the present. It will be noted that the position of president was held mostly by males, but it should be pointed out that women were among the officers of the society. Figure 1 shows a photograph of the oath-taking of Alejandro Apacible as CSP president in May 1964, together with his co-officers among which are three women.

## THE CHEMISTRY LAW

A landmark in the history of chemistry in the country is the enactment of Republic Act 754 (or the Chemistry Law) on June 1952. The passage of this law was lobbied by the CSP, under the leadership of Dr. Amando Clemente, Dr. Joaquin Maranon, Mr. Benito Legarda Jr., Atty. Lorenzo Sunico, Mr. Ananias Diokno Jr., and Dr. Marcos Alicante (Natividad and Cosio, 1970). The bill was proposed by Sen. Ramon Diokno and sponsored by Sen. Pedro Vera. Through this law, the government recognized chemistry as a profession and set provisions for the regulation of its practice in the country. It required a certificate of registration for the practice of chemistry as a profession, and the formation of a Board of Examiners for Chemists which will issue this certificate.

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<sup>7</sup> The Integrated Chemists of the Philippines was organized in response to the call of the President of the Philippines (F. E. Marcos) in 1977 for all professionals to unite under one integrated body, similar to the Integrated Bar of the Philippines.



Figure 1. Oath-taking of the CSP officers in May 1964, with Alejandro Apacible (3<sup>rd</sup> from left) as president. (Reprinted from *The Chemists' Quarterly* Vol. 5 (1964).

**Table 1. Presidents of the Chemical Society of the Philippines (1973-1970), Kapisanan ng mga Kimiko sa Pilipinas (1971 - 1997), and Kapisanan Kimika ng Pilipinas (1998 - present).**<sup>8,9</sup>

Year	President
1937 - 1951	Amando Clemente
1951 - 1954	Benito Legarda
1954 - 1955	Ananias Diokno Jr.
1955 - 1956	Marcos Alicante
1956 - 1957	Hermenegildo Rosales
1957 - 1959	Ignacio Salcedo
1959 - 1961	Florencio Medina
1961 - 1962	Ignacio Salcedo
1962 - 1963	Florencio Medina
1963 - 1966	Alejandro Apacible
1966 - 1967	Lorenzo Sunico
1967 - 1970	Felix Maramba Jr.
1970 - 1974	Annie Ferrazzini
1974 - 1976	Florencio Medina
1976 - 1980	Amando Kapauan
1980 - 1982	William Padolina
1982 - 1983	Bienvenido Juliano
1983 - 1986	Rogelio De Leon
1986 - 1988	Benigno Peczon
1988 - 1989	Carlito Barril
1989 - 1990	Marlito Cardenas
1990 - 1996	Fortunato Sevilla III
1996 - 1999	Elma Llaguno

<sup>8</sup> Each term of the presidents covered two years, since the elections were conducted in the middle of the year.

<sup>9</sup> The roster was compiled from a list published in the 1970 issue of *Chemists' Quarterly* (Natividad and Cosio, 1970) and from the souvenir program of the 16<sup>th</sup> Philippine Chemistry Congress in 2000. The names of the KKP presidents after 2000 were based on the souvenir programs of the annual Philippine Chemistry Congress. Some of the names in the 2000 list, particularly for the period of 1956 to 1976, were corrected after verification from issues of *Chemists' Quarterly* of the corresponding years.

1999 - 2005	Eric Punzalan
2005 - 2008	Irene Villasenor
2008 - 2017	Nestor Valera
2017 - 2020	Leon Payawan Jr.
2020 - 2021	Patrick John Lim
2021 - present	Christina Binag

In 2015, the Chemistry Law was re-formulated to adapt to the many scientific developments in the field of chemistry and to the rise of globalization and competitiveness in the economic sphere where chemistry is applied. The KKP cooperated with the Integrated Chemists of the Philippines (ICP) and the Philippine Federation of Chemistry Societies (PFCS) in drafting a new law for the regulation of the practice of Chemistry. Known as the Professional Chemistry Law, it was promulgated as Republic Act 10657 upon its approval on March 2015. It replaced RA 754, and it required the registration of chemists, chemical technicians, and chemical laboratories.

## TECHNICAL DIVISIONS

Technical divisions were first organized within KKP in 1973 to bring together members sharing a similar professional and scientific interest in particular fields of chemistry (KKP, 1973). The divisions covered the broad areas of chemistry, together with chemical education. There were six (6) divisions including the Division of Agricultural Chemistry, the Division of Analytical Chemistry, the Division of General and Inorganic Chemistry, the Division of Organic Chemistry, the Division of Physical Chemistry, and the Division of Chemical Education.

The divisions were tasked to plan activities covering their area of interest. The activities of the divisions ranged from promoting research to sponsoring seminars, colloquia, and conventions to engaging the youth in environmental monitoring to encouraging the use of the national language in chemistry discussions (KKP, 1973).

In 1997, the creation of technical divisions was provided for by the revised KKP By-Laws of 1997, which set a minimum of 20 members for the formation of a division (KKP, 1997). The divisions were envisioned to facilitate exchange of technical information and sharing of experiences among the members, helping them to stay current in their field of specialization,

The first division to be established was the Division of Analytical Science (KKP-DAS), which was formed in 1996, before the enactment of the revised By-Laws. Its initial motive was to promote the updating of chemists on the different instrumental methods of chemical analysis, considering their limited exposure to these techniques during undergraduate education. It also pursued activities to familiarize members on the developments and trends in analytical science, such as chemical sensors and biosensors, and the application of statistics in chemical analysis. It organized international conferences that provided an opportunity for KKP members to interact with overseas experts in specialized areas of analytical science.

More technical divisions were formed in the succeeding years. The Division of Inorganic and Allied Fields (KKP-DICAF) was organized in 2008, in time for the holding of the 10<sup>th</sup> Eurasia Conference on Chemical Sciences. The Division of Physical Chemistry (KKP-DIPC) was formed following a CHED-sponsored faculty updating workshop on Quantum Chemistry conducted by KKP in 2009. The Division on Organic Chemistry (KKP-DOC) was finalized recently after the Organic Chemistry Teachers' Association (OCTA) agreed to be integrated in this division. OCTA was founded in 1971 and was active in holding seminar-workshops, which contributed to the updating of the teaching of organic chemistry, from an encyclopedic approach to a rational approach. The Division of Polymer and Materials Science (DPMS) was recently initiated to bring

together chemists working in the multidisciplinary field of Polymer Science and Materials Science.

## REGIONAL CHAPTERS

The organization of regional chapters outside Manila was provided for in the amended By-Laws of 1954. An initial membership of at least 15 regular members was required (Natividad and Cosio, 1970). The chapters would promote the mission of the society in their region and facilitate activities of the mother organization in their region. Regional chapters have been formed in the Los Baños area, in the Bicol region, in Cebu province, in the Panay region, and in the northern Mindanao region.

The oldest regional organization of chemists in the country is the Cebu Chemical Society, which served as the KKP chapter in Cebu. It has existed since 1954, even before the CSP thought of forming regional chapters (Natividad and Cosio, 1970). It was established by a core of faculty members from the University of San Carlos, and its membership grew to include chemists from the government and industry sectors. It sponsored the first CSP Annual convention held outside Manila in May 1962 (Leceta, 1963). It also hosted the 6<sup>th</sup> Philippine Chemistry Congress in May 1990.

Another regional organization of chemists is the Kapisanang Kimika ng Pilipinas – Southern Tagalog (KKP-ST). It started as the KKP chapter in Los Baños (KKP-LB), which was formed in 1971 by a group of chemistry professionals from the University of the Philippines at Los Baños (KKP-ST, 2021). The membership of the chapter expanded to include chemists from the nearby provinces, causing its name to be changed to its present name. It has been holding annual conventions, having its 50<sup>th</sup> annual convention in tandem with its 1<sup>st</sup> International Scientific Conference in 2021.

A KKP chapter was formed in the Mindanao region in the early 1990s, initially covering only Region X. Its membership expanded since then and now includes chemists in Region X, Region XII, Autonomous Region in Muslim Mindanao (ARMM), and Caraga region. It has been organizing the Regional Chemistry Congress since the 1990s, with the venues alternating during its early years from Cagayan de Oro City (Misamis Oriental) to Musuan (Bukidnon) to Iligan City (Lanao del Norte), and Marawi City (Lanao del Sur).

The KKP Bicol chapter was organized in 2000 with members coming from Albay, Sorsogon, Camarines Sur, and Camarines Norte. It was created to promote the mission of KKP in the Bicol region and to serve the community through technical knowledge and skills in the chemical sciences.

## AFFILIATE ORGANIZATIONS

In 1961, CSP members from several colleges and universities organized the Philippine Association of Chemistry Teachers (PACT) motivated by the guest speaker in a conference on new approach in the teaching of chemistry (Llenado, 1961; PACT, 1996). The organization aimed to devote interests and concerns on the improvement of the teaching of chemistry and consolidate efforts in solving problems encountered in chemical education in the country. It complemented the activities of CSP in promoting the advancement of chemistry at grass roots levels in schools, colleges, and universities. The officers were elected from the representatives of different colleges and universities, with Mariano Pangan of the University of Santo Tomas as its first president. Through the years, the PACT evolved to be a distinct organization from the CSP/KKP, drafting its own constitution and by-laws and registering with the Securities and Exchange Commission.

The KKP, in its By-Laws in 1954, projected the formation of student or junior chapters, just like what was done by the Philippine Pharmaceutical Association (Natividad and Cosio, 1970). This plan did not materialize, instead what was formed was the Philippine Association of Chemistry Students (PACS), which was established in 1964 as an affiliate organization of the CSP (Leceta, 1963). It was composed of the chemical societies of several universities, which initially included the Adamson University, Centro Escolar University, Far Eastern University, FEATI University, Mapua Institute of Technology, Manuel L. Quezon University, National University, University of the Philippines, and the University of Santo Tomas. The officers of the PACS were elected from among the representatives of the member organization, with Teresita Villegas of the Mapua Institute of Technology as the first president. The chair of the CSP Committee on Student Activities served as the adviser of this student organization.

## CSP / KKP LOGO

The CSP / KKP By-Laws, in its original and revised versions, includes an article on Seals and Emblems (commonly referred nowadays as “logo”) which are meant to represent symbolically. Figure 2 shows the logo used in its first issue of the Chemists’ Quarterly in 1954 and in the revised By-Laws in 1997. Both versions feature a circular format, with a central design featuring a simple version of the Bohr atom enclosed by the hexagonal Kekulé structure of benzene. Though now outdated, these designs are retained to reflect the symbols associated with chemistry during the foundation of society. The English name of the organization is used in both logos; however, the current Filipino name has been added in the most recent logo. The color of blue has been used in the two versions.

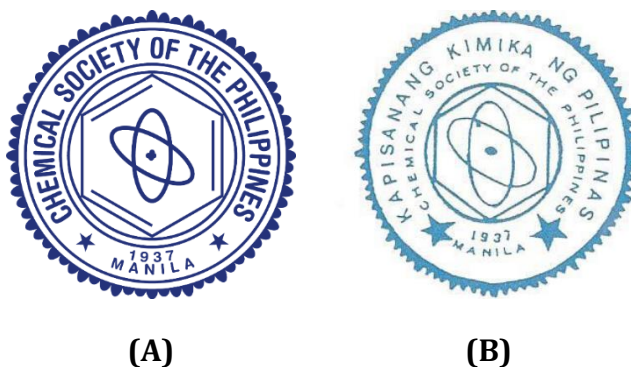


Figure 2. Evolution of the Emblem (or logo) of the CSP / KKP used in (A) the 1954 issue of the Chemists’ Quarterly, and (B) in the 1997 By-Laws.

## CSP / KKP PUBLICATION

In accordance with its amended By-Laws, the CSP started to publish CHEMISTS’ QUARTERLY as its official journal in 1954. Printed in a trade book size format (22.9 x 15.2 cm), this periodical featured research papers contributed by its members and papers presented during the annual conventions and seminars of the society. It also contained some news and updates for the information of its members.

Its first editor-in-chief was Dr. Amando Clemente, who was succeeded by Dr. Antonio de Leon. After three issues in 1954, the publication ceased due to lack of funds. It was revived in 1961 through funds raised from advertisements, with Lorenzo Sunico as the editor-in-chief (Natividad and



Cosio, 1970). It was issued regularly until 1973. Paz Abis took over the editorship in 1966, when Atty Sunico was elected as the president of the society.

In 1982, KKP resumed the publication of its journal, but re-named it as KIMIKA, consistent with the Filipinization of the name of the society. Its first editor-in-chief, Benigno Peczon, envisioned it to be a research journal, featuring peer-reviewed papers and reports. Some issues were published as a proceedings of KKP annual conventions featuring the full-papers of conference presentations.

The initial issues of KIMIKA were printed in a pocket book sized format (21.0 x 14.8 cm), slightly smaller than the size of the Chemists' Quarterly. However, starting in 1989, KIMIKA adopted an A4 magazine sized format (29.7 x 21.0 cm) when it was printed using desktop devices due to limited financial resources. In 1993, with the availability of funds from the Department of Science and Technology - Philippine Council for Advanced Science and Technology (PCASTRD), from the Philippine Chemistry Congress, and from advertisers, the journal was printed by a commercial press and had a full-color cover design. Figure 3 shows the evolution of the covers of the printed journals. Table 2 lists the names of the past editors-in-chief of KIMIKA.

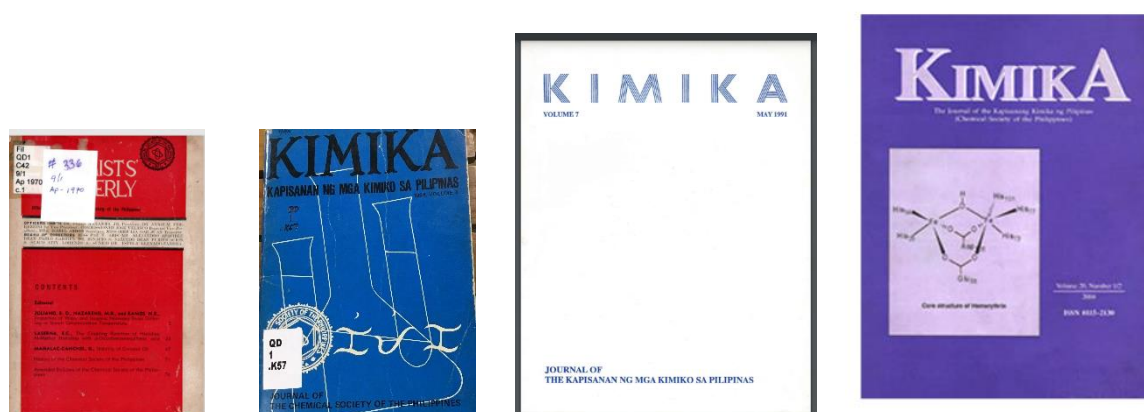


Figure 3. The evolution of the CSP / KKP publication.

Table 2. KIMIKA editors-in-chief

Volume (year)	Editor-in-chief
Vol 1 (1982) – Vol. 4(1988)	Benigno Peczon
Vol. 5 (1989) – Vol 11 (1995)	Elma Llaguno
Vol 12 (1996) – Vol. 21(2005)	Fortunato Sevilla III
Vol. 22 (2006)	Maria Assunta Cuyegkeng
Vol. 23 (2010)	Armando Guidote Jr.
Vol. 24 (2013)	Florecita de Guzman
Vol. 24 (2013) to present	Drexel Camacho

The issues of KIMIKA were published regularly until 2006. From 2007 to 2012, only one issue was published. In 2013, KIMIKA was transformed into an on-line journal, to reduce production expenses and to increase its visibility and accessibility. A website of the journal was set up to facilitate submission of papers and the accessibility of the issues in the Internet. The content of the KIMIKA website was expanded to include earlier issues starting with 2003.

## CHEMICAL EDUCATION

CSP has upheld the importance of chemical education in the future of chemistry and chemical research in the country. It has extended support for the improvement of the education and training of future chemists. A number of CSP officers were from the academe and therefore, several seminars and workshops were organized for chemistry teachers and students, and were held in the universities. The conferences on chemistry teaching paved the way for the organization of Philippine Association for Chemistry Teachers (Llenado, 11961).

In the recent decades, KKP has cooperated with the Commission on Higher Education (CHED)<sup>10</sup> in the formulation of policies, standards, and guidelines for the baccalaureate and graduate programs in Chemistry. The president of KKP is invited to be a member of the CHED Technical Committee for Chemistry. KKP supported the integration of advanced courses in Physical Chemistry and Analytical Chemistry in the undergraduate curriculum to strengthen the background of the students in quantum mechanics and in quality assurance, respectively.

KKP collaborated with CHED in activities for faculty updating on the topics that were integrated in the undergraduate chemistry program. It also partnered with CHED in organizing activities on chemical education, such as the project on Improving Chemical Education in the Philippines funded by the International Union for Pure and Applied Chemistry (IUPAC) under Flying Chemists Program in 2008 (Sevilla, 2008) and the Workshops on Microscale Chemistry in 2009 funded by the Science Education Institute (CHED, 2009).

## CONTINUING CHEMICAL EDUCATION

KKP provided opportunities for the continuing chemical education of its members, enabling them to update their chemical knowledge on the latest development in the science, particularly those that took place after they left university. These activities have been helpful in the scientific and professional career of its member chemists, considering the rapid progress that has been occurring in the different areas of chemical science.

Lectures and seminars were held on newly developed chemical analysis methodology, particularly those involving instrumental techniques, and their applications in environmental and industrial analysis. Topics of timely interests, such as coconut research, environmental pollution, food safety, and health hazards were discussed in KKP fora and symposia. In the recent decades, several updating activities were focused on new materials, such as novel polymers, functional materials and nanomaterials. A series of on-line seminars and lectures were held this year by the different technical divisions on the occasion of the 85<sup>th</sup> year of KKP.

## NATIONAL AND INTERNATIONAL CONVENTIONS

Since its start, CSP has been holding an annual gathering which involved scientific sessions and a fellowship social. These conventions provided opportunities for members to network, share and exchange knowledge, as well as to build friendship and renew acquaintances. Before the war, the Pharmacy Pavilion of the Philippine General Hospital was the venue of these activities (Natividad and Cosio, 1970). The post-war conventions were held in the auditorium and lecture halls of universities in the 1960s and in the following years, the Paulino Garcia Memorial Hall in the National Science Development Board (NSDB) compound in Herran (now Pedro Gil) Street was the site of the conventions. The annual conventions were also held outside the Manila area, the

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<sup>10</sup> The Commission of Higher Education was created in 1994 to oversee tertiary and graduate education in the Country.

first one being held in Cebu City in 1964 (Leceta, 1963). The other out-of-town conventions were held in the University of the Philippines in Los Baños, Laguna, St. Louis University in Baguio City and in Currimaog, Ilocos Norte.

In 1985, the KKP annual national convention was transformed into the Philippine Chemistry Congress (PCC) which was jointly organized by the KKP, the Integrated Chemists of the Philippines, the Organic Chemistry Teachers' Association, and the Philippine Association of Chemistry Teachers. In 1988 with the eventual formation of the Philippine Federation of Chemistry Societies, the PCC has become an annual scientific and social event for chemists in the country and has been held in different parts of the country.

International conferences have also been organized by KKP to provide a platform for the interaction and establishment of linkage of local chemists with their overseas counterpart. Several of these conferences were held in tandem with the Philippine Chemistry Congress, such as the 6<sup>th</sup> Asian Chemical Congress held in 1996, the 10<sup>th</sup> Eurasia Conference on Chemical Sciences held in 2008, the Asia-Pacific Conference in Analytical Sciences in 2002 and 2012, the Third Asia-Pacific Food Analysis Network Conference, and the Third Regional Electrochemistry Meeting of Southeast Asia in 2012.

KKP was an affiliate sponsor of the 2<sup>nd</sup> CHEMRAWN (Chemical Research Applied to World Needs) Conference organized by the International Union of Pure and Applied Chemistry (IUPAC) and the International Rice Research Institute (IRRI) in 1982. The KKP Division of Analytical Sciences held specialized conferences, such as Asian Conference on Sensors in 2007 and the 8<sup>th</sup> International Conference on Sensors in 2018. In 2023, an International Conference on Chemistry was organized as a celebration of the 85<sup>th</sup> foundation year of KKP.

## CSP / KKP AWARDS

A notable award granted by the CSP was the Grand Cross Award conferred on the President of the Philippines Carlos Garcia in July 1958 at the Malacañang Social Hall (Republic of the Philippines, 1958). President Garcia signed into law Republic Act 2067, known as the Science Act of 1958, which declared the commitment of the country to support scientific and technological research. The law created the National Science Development Board<sup>11</sup>, the National Institute of Science and Technology, and the Philippine Atomic Energy Commission.

A CSP President's Medal was awarded in 1964 and 1965 to chemistry students who have achieved high scholastic honors and participated actively in the Chemical Society of their university. This award was instituted during the term of Alejandro Apacible as president, and was presented to two graduates from the Centro Escolar University (Leceta, 1964; Leceta, 1965).

Research awards were presented by CSP/KKP to foster excellence in research among chemistry students. From 1966 to 1972, the best undergraduate and graduate research papers were given recognition by the society (Leceta, 1971). The awardees were chosen by a panel of evaluators organized by the society. Cash awards were given, and some of the best research papers were published in the Chemists' Quarterly. –

In 2023, the KKP Emerging Researcher Award was instituted to recognize productive early-career researchers in the field of chemistry. This recognition filled a gap in the recognition

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<sup>11</sup> The National Science Development Board (NSDB) is the predecessor of the present Department of Science and Technology (DOST).

awards for research in chemistry, since awards were usually presented to established researchers for their life-time achievement.

## **CHEMISTRY WEEK**

In order to increase public awareness of the importance of chemistry in improving the quality of life and in driving national development, the KKP championed a national celebration of Chemistry Week. This advocacy led to the issuance of Proclamation No. 1244, s. 1974 from the Office of the President of the Philippines on March 1974 (Office of the President of the Philippines, 1974). This presidential order declared the period of 25 to 30 March 1974 as Chemistry Week and designated KKP to coordinate the activities to be undertaken during the week for the promotion of interest in and attention on the chemical science among the general public, particularly the youth.

Another proclamation was made in the following year which set Chemistry Week on the last full week in February of every year, beginning on 1975 (Office of the President of the Philippines, 1975). The period enabled schools and universities to participate in the observance of Chemistry Week, since the period of celebration cited in the previous proclamation fell outside the academic year. The coordination of the activities to be held during the week was assigned to the KKP.

Chemistry Week has become an annual national celebration of the chemistry community in the country. KKP together with its chapters and the Integrated Chemists of the Philippines, the Philippine Association of Chemistry Teachers, the Philippine Association of Chemistry Students sponsor activities that engage a wide range of audience in recognizing the important contribution of chemistry to everyday life and to national development.

## **INDUSTRY LINKS**

The CSP / KKP has maintained an active linkage with the industry sector, through its members, some of whom were active officers of the society. The society has organized conferences, which focused on important chemical process industries, such as the coconut, sugar, pharmaceutical, food, beverage, petroleum, and mining industries. These conferences provided a significant platform for the interaction of the research community and the industry sector in sharing their experiences and ideas.

In 1964 during the annual convention held in Cebu City, the CSP recognized the outstanding achievements of several industrial companies for the application of chemistry in the national economic and industrial development (Diala, 1965). Awards were given to the Pan Oriental Match Co., Inc (Cebu City), General Milling (Cebu City), Pascual Laboratories (Malabon, Rizal), Union Carbide Phil. (Mandaluyong City), and Lu, Du and Lu YM Corporation (Cebu City).

## **CONCLUSIONS**

As the KKP continues to fulfill its mandate of driving forward chemical knowledge in the country, it harnesses the active involvement of researchers in its activities. The activation of the technical divisions allows focused efforts that could influence the direction and the pace of advancement in the various research areas in chemistry and in its allied field. As KKP consolidates the experiences of the researcher members of its various technical divisions, it could contribute to the formulation of policies that can accelerate the advancement of chemical research in the country.

The dissemination of chemical knowledge has been a conscious goal of the KKP. It has directed its activities towards keeping its members abreast with the recent developments in chemical science and technology. The cooperation of KKP with government agencies and private institutions ensured the relevance and currentness of the programs for the education and training of chemists and chemical technicians. It has yet to maximize its efforts in popularizing chemistry among the general public sector, making more people understand and appreciate chemistry and its benefits in everyday life. The emergence of computers and social media enables KKP greater visibility and higher efficiency in fulfilling this mission.

The KKP shares its mission with the other chemistry organizations which address the needs of specific sectors, such as the professional chemists, the chemistry teachers, and the chemistry students. It sustains its responsibility of promoting and influencing the growth and advancement of chemical knowledge in the country and making it available to all – to scientists and non-scientists.

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