



One Hundred Years

The covers of the ECS serial publications have an additional emblem this year. It is the number 100 on the upper left side. This has been added to commemorate 100 years of publishing, dating back to the Society's formation in 1902. The *Journal*, which began publication the same year, did so under a different title and was primarily a record of the papers given at the biannual Society meetings. How different is the world after 100 years of publishing? Let's go back to 1902 and see what the times are like.

If you want to attend the biannual meeting of the Society, it will be a time-consuming trip. You could look for a car; there are about 10,000 in the United States; however, next year, in 1903, it will be easier because Henry Ford will start the Ford Motor Company. Air travel is hard to find because it will be another year before the Wright Brothers take the first flight in Kitty Hawk, North Carolina. The link to Europe is primarily through the printed word. Electronic publishing is on the way though, because last year, Marconi sent the first transatlantic wireless communication. This year Charles Lindbergh, who eventually will make the first solo transatlantic flight, will be born. In Europe, it is a period of great scientific discovery. Max Planck has just presented his theories forming the basis for quantum mechanics. Fellow German Albert Einstein will present his theory of special relativity in 1905, just three years away. The first Nobel Prizes were awarded last year by the Royal Academy of Sciences in Stockholm. Roentgen received the prize in physics for his discovery of the X-ray and Jean Henri Dunant received the prize in peace for founding the Red Cross. This year, Lorentz and Zeeman will receive the prize in physics for the effect of magnetism on light.

Europe itself is still feeling the fallout from the conquests of Napoleon. Independence for Norway and the peak of the Finnish resistance are only three years away, but it will be another 15 years before Finland gains independence. Elsewhere, the death of Queen Victoria in Great Britain last year and downfall of the Ottoman Empire are big news. In the Victorian period, Britain ruled a quarter of the world. Now, many new countries are being formed, like the Commonwealth of Australia last year in 1901. For others, it will still take some time. Egypt is still a part of the old Ottoman Empire, as is Mesopotamia, which will eventually become Iraq. King Ferdinand will declare Bulgaria's independence from the Ottoman Empire in just six years. In Russia, you can be part of the creation of the new Russian Social Democratic Labor Party, but you can't be a Bolshevik because it will be another year before the party is created. China is still involved in the Boxer Rebellion and you will have to wait another nine years for the creation of the Republic of China. You won't be able to find anyone from Thailand because it will remain Siam for another 37 years.

Air conditioning is an important field in engineering, and Willis H. Carrier will design the first modern air conditioning system this year. Refrigeration will do wonders for countries like New Zealand to transport meat back to Great Britain. This is also the year that the newly elected Liberal Party in New Zealand becomes the first country to give women the right to vote. It will only be five more years before New Zealand becomes a Dominion.

In literature and the arts, you can buy new works by Leo Tolstoy, Mark Twain, and George Bernard Shaw. Pablo Picasso is barely more than a child prodigy and is just entering his "blue period." Henri Matisse is starting to use bright colors in his paintings and it will be years yet before he is in his prime.

In North America, electric power plants are of great interest to electrochemical processing. Canada's new hydroelectric plants and transcontinental railroads are big news and signs of prosperity. Don't look for meeting attendees from Alberta or Saskatchewan, because those provinces won't be created for another three years. Mexico's economy is improving under President Porfirio Diaz after independence in 1820. In the United States, Teddy Roosevelt has recently returned from charging San Juan Hill with the Roughriders and became president after McKinley was



assassinated in Buffalo, NY. The Buffalo area is also of great interest to the Society because of the electricity generated from nearby Niagara Falls.

It is a young man's time at the first ECS meeting, mostly because there are not many older ones around. Life expectancy in the United States is only 47 years. In 2002, people will enjoy showing their age by talking about when they worked on vacuum tubes. You don't see much of that in 1902 because it will be another four years before Lee DeForest and later Walter Schottky make something of Edison's 1880s invention of the vacuum tube. It will be another two decades before everyone will enjoy the golden age of radio.

In another 100 years, 2102, we will do this again. Niagara Falls will still be flowing but silicon integrated circuits will have gone the way of vacuum tubes. We will have combusted most of our oil and natural gas into carbon dioxide by then, but don't worry, those new mass transponders will be wonderful. Life expectancy will be up to 97 years, and we will be publishing Volume 249 of the *Journal*.

A handwritten signature in black ink, appearing to read 'PKohl', with a stylized, cursive script.

Paul A. Kohl
Editor