

## International Year of Chemistry postage stamps: omnibus mass communicator

The International Year of Chemistry – IYC 2011 coincides with the 100th anniversary of the founding of the International Association of Chemical Societies (IACS), later which was succeeded as the International Union of Pure and Applied Chemistry (IUPAC) and the Nobel Prize to Marie Curie (1911)<sup>1</sup>. IUPAC and UNESCO coordinates the activities and events. Focused on ‘achievements of chemistry and its contributions to the well-being of humankind’<sup>2</sup>, a dozen postage stamps have been issued by 10 nations worldwide, within the first quarter, to celebrate and ridge the IYC campaign as a ‘cultural event’ to entice society, scientists and policy makers. These postage stamps exhibit the cultural figures of IYC. The ‘cultural artefacts’ prospectively ‘visual cultural marker’<sup>3</sup> are enlisted as cultural property by UNESCO in its 1970 convention<sup>4</sup>. Information and communication technology in digital image form further enhances the role of these ‘omnibus stamps’ as an information communication tool for disseminating the message to the public.

A wide range of interactive, entertaining and educational activities of the ‘creative future of chemistry’, under the unifying theme ‘Chemistry – our life, our future,’ emphasize chemistry as a creative science essential for sustainability and improvement of life, and for the production of food, health and manufactured goods. Having an IYC stamp incorporating an aspect of chemistry relevant to the issuing country is ‘a neat, inexpensive way of celebrating chemistry’ reports Wang<sup>5</sup> quoted Daniel Rabinovich<sup>6</sup> in her report.

Christoph Kohl<sup>7</sup> conceives postage stamps as a special kind of medial icons of popular culture. Media are a communication channel that transport specific sign systems, like language, writing systems, pictography and symbols. Besides, media is organized to make contents accessible in print, broadcast or digital forms, thus performing an important task for the society or target groups. Media comprises processes of production, provision and reception, and is institutionalized into a normative system as defined by the state. Kohl further cited Burkart<sup>8</sup>.

In the print media postage stamps bear different kinds of sign systems, such as writing systems and symbols related to a specific nation/state. Stamps fulfil the essential service of material communication through message transport. Beyond that, postage stamps can even be conceived as mass media (Mass media disseminates messages widely, rapidly and continuously in order to arouse intended meanings in large, diverse and selectively attending audiences.). As such they bridge the spatial distance by indirect, impersonal communication. The communication is unilateral, marked by implicit reciprocity; not all users may pay attention or understand the message borne by the stamps<sup>7</sup>.

Jack Trammell<sup>3</sup> cited Xin-An Lu<sup>9</sup>, as ‘stamps travel and have dynamic geographic salience’ explaining that ‘the images and references on stamps change and educate the viewer, who sees (and reads) them’. They carry national culture around the world, like a small advertisement or poster that passes from one region to another, disseminating information<sup>7</sup>.

Some stamps, however, depict images of international importance, beyond the attitude of nationalism. A special webpage entitled ‘IYC Postage Stamp Central’<sup>6</sup> in IYC website (<http://www.chemistry2011.org/participate/activities/show?id=533>) by Daniel Rabinovich<sup>6</sup>, presents a collection of ‘commemorative IYC stamps’ already issued during 2011 by 10 countries (and many more are expected to be released throughout the year). These are ‘omnibus issues’ (the term describes stamps or sets of stamps released by several different countries to mark the same event). Rabinovich provides excellent magnified images of them (see Figure 1). Whereas Linda Wang<sup>5</sup> describes some of them. Through the issue of stamps, countries send messages about themselves and their national attitudes towards science via the postal authorities. However, due to lack of policy for IYC commemorative issue by USA, we observe a personalized stamp on IYC logo (see image 1, Figure 1).

Israel issued a pair of stamps (images 2 and 3, Figure 1) – the first among IYC commemorative stamps – depicting ribo-

some and ubiquitin, honouring contributions of Israeli scientists to molecular biology that led to two Nobel Prizes (in 2004 and 2009).

Belgium and Slovakia jointly issued stamps (see images 4 and 5, Figure 1) on the same date on the same topic but with different designs displaying the molecular structure of water and carbon dioxide. The Slovak issue depicts photosynthesis the ingenious natural chemical reaction – as an exceptional waste-free process, directing chemically motivated human activity. The calotte model is the basis of the design. Colouring of the stamp reflects stages of photosynthesis: light in the form of sunlight and dark as blue colour symbolizing water. Sunlight and chlorophyll act as catalysts, resulting in oxygen and glucose, essential molecules that play a major role in life. This stamp can be a good resource for educators.

France celebrates the centenary of Nobel Prize in Chemistry to Madame Curie with ‘a classic portrait of the famous chemist in her lab’ on IYC stamp (image 6, Figure 1). Sri Lanka’s stamp (image 7, Figure 1) shows Curie alongside M. U. S. Sultanbawa – one of Sri Lanka’s most distinguished chemists; below their portraits is the national gem, together with molecular aluminum oxide. The stamp from Spain also celebrates Curie’s accomplishments by featuring her portrait (image 8, Figure 1).

The Indonesian stamps (images 9 and 10, Figure 1) feature the xanthone derivative – artoindonesianin C, isolated as a potential anticancer agent at Bandung Institute, Indonesia, and the other feature official IYC logo. The Swiss stamp features vitamin C (image 11, Figure 1); Swiss chemist Tadeus Reichstein synthesized the compound for the first time.

The Jersey stamp features Marie Curie (image 12, Figure 1), on one stamp among four in the set ‘Women of Achievement’, whereas the Bosnia and Herzegovina stamp (image 13, Figure 1) celebrates the centennial Nobel Prize. However, these stamps make no mention of IYC.

The IUPAC project intended to draw attention to chemistry as a cultural enterprise. Rabinovich expects more than two



**Figure 1.** IYC celebration through commemorative postage stamps. Image 1, Personalized USA stamp; Images 2 and 3, A pair of stamps from Israel with molecules, ubiquitin and ribosome; Image 4, Belgium stamp; Image 5, Slovak issue – Joint IYC issue; Image 6, Stamp of France; Image 7, Sri Lankan IYC special commemoration; Image 8, Curie on Spain IYC issue; Images 9 and 10, A pair of stamps from Indonesia on IYC 2011; Image 11, Swiss stamp featuring vitamin C for IYC celebration; Image 12, Jersey stamp on Curie and Image 13, Bosnia and Herzegovina issue. Courtesy: IYC Postage Stamp Central. Daniel Rabinovich: <http://www.chemistry2011.org/participate/activities/show?id=533>.

dozen IYC stamps to be issued by the end of the year<sup>5</sup>. According to him, they can be used as a ‘way of communicating chemistry, which many people who are not even chemists appreciate’. The IYC 2011 postage stamp reflects on ‘chemistry as a cultural enterprise’<sup>10</sup>, showing the chemical impact on the culture and/or everyday life, and points out the multiple contributions of chemistry to society highlighting its role in the welfare, safety and health of all people.

At the end of the first quarter of the year of celebration, we observed that 12 out of 13 (13th is USA’s personalized stamp) stamps are commemorative IYC stamps, all rectangular; 7 of them in landscape or horizontal orientation. Of

them six bear IYC logo (one with logo as the main vignette, two with the logo as an elemental part of the design and three with selvaige with logo) and ten have related script, whereas two, though representing Madame Curie, have no mention of IYC within the imagery. Three depict glassware, seven depict molecules and five portray scientists – Madame Curie as omnibus international fame and M. U. S. Sultanbawa, as national identity of the issuing country. Five out of ten issuing countries retained their spirit of nationalism while issuing IYC stamp. Two countries, Israel and Indonesia, issued two stamps each, whereas Belgium and Slovak issued one stamp each, but jointly. The one from Jersey with the image of

Curie can be tagged to the centenary celebration of the International Women’s Day having been issued on 8th March, yet another coincidence with the IYC celebration.

The omnibus IYC 2011 postage stamps communicate, disseminate and propagate IYC message of chemistry culture to the masses. IYC stamps help to recognize the potential of stamps which are largely regarded as ‘collection materials’. They are also a ‘source of information’; additionally, as an ‘information-recording medium’ and as ‘information disseminator’ with ‘visual effect’. As a ‘chemistry ambassador’, IYC stamps spread the importance of chemistry to the public, enhanced further by the digital images (scans) on the website in the present information and communication technology era.

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