

NEW IUPAC TOOLS FOR RESEARCH AND TEACHING

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ABSTRACT

One of the goals of IUPAC is to support Education in Chemistry, see for example 'The Commission on Chemical Education' (CCE) and the website on educational resources.¹ There are, however, a number of further activities driven by the IUPAC Division IV (Polymer Division) that will be presented in this contribution.

First of all, there is the so-called 'Multilingual Glossary on Basic Terms in Polymer Science'.² This project is the start of a free online accessible dictionary that provides translations of the Glossary of Basic Terms in Polymer Science³ from English into a number of other languages of importance to the scientific community and *vice versa*. At the moment, translations into Czech, English, French, German, Polish, Portuguese (Brazilian), and Spanish are available and an Italian version is in preparation. Translations into the character-based languages such as Chinese, Japanese, and Korean are also in preparation but since special techniques are needed for their presentation, this makes for a far larger task. Nevertheless, the system is open to any language that can provide an authorized translation of the IUPAC terms. The dictionary, which is now beyond the experimental stage, is presently hosted by the Universidade Federal de Ouro Preto, Ouro Preto, Brazil but is accessible via a link on the IUPAC Division IV webpage.²

Another important project that is underway is assisting Wikipedia to improve its definitions of polymer-related terms. This is done by adding new entries and by enhancing existing entries with an insert (transclusion) of the IUPAC-approved definition to supplement the existing Wikipedia text.

Very recently, 'A Brief Guide to Polymer Nomenclature'⁴ has been published to enable understanding of the most important features of the available methodologies for naming polymers. This condensation from the lengthy original nomenclature documents into one of only two pages will have a counterpart in 'A Brief Guide to Terminology' which is currently in preparation.

These recent innovative activities parallel the more usual IUPAC development of nomenclature rules and terminological definitions directed towards the unification of scientific language. To facilitate access to polymer related material for university and high school students and teachers is the educational website of the IUPAC Polymer Division,⁵ which also contains teaching material was presented in POLYCHAR Short Courses. A similar educational website is under development for wider coverage of the whole area of materials chemistry.

References:

¹ [http://www.iupac.org/nc/home/publications/e-resources/educational-resources.html?sword_list\[\]=Education](http://www.iupac.org/nc/home/publications/e-resources/educational-resources.html?sword_list[]=Education)

² http://www.iceb.ufop.br/dequi/iupac/polymerglossary/terms_search.php

³ Jenkins, A. D.; Kratochvil, P.; Stepto, R. F. T.; Suter, U. W., *Pure and Appl. Chem.* **1996**, 68 (12), 2287-2311

⁴ Hiorns, R. C.; Boucher, J. J.; Duhlev, R.; Hellwich, K. H.; Hodge, P.; Jenkins, A. D.; Jones, R. G.; Kahovec, J.; Moad, G.; Ober, C. K.; Smith, D. W.; Stepto, R. F. T.; Vairon, J.-P.; Vohlidal, J., *Pure and Appl. Chem.* **2012**, 84, 2167-2169; <http://www.iupac.org/publications/pac/> and <http://www.chem.qmul.ac.uk/iupac>

⁵ <http://www.iupac.org/polyedu/index.html>