## Safety Training Program e-learning

The IUPAC Safety Training Program (STP), a global project from the Committee on Chemistry and Industry (COCI), has contributed to Global Chemical Safety for over 20 years. Until now, two main modalities of STP were developed, both face-to-face: STP Fellowship Program and STP Latin America (STP-LA). The scope of both modalities is necessary limited regarding the number of trainees and involves relatively high costs (travels, lodging and meals).

In the last years, it was very difficult get companies willing to host and get partners to financial support for STP Fellowship Program. Considering the current COVID-19 pandemic, this situation does not seem likely to improve. In this context, STP e-learning arises, as alternative of the face-to-face modalities, but with the same spirit and objectives of original STP.

The objective of STP e-learning is revitalize the STP as a whole, broadening the scope regarding the number and countries of origin of the trainees. The STP-learning has four partners: COCI, Organization for the Prohibition of Chemicals Weapons (OPCW), Chemical Industries Association of Uruguay (ASIQUR) and Foreign Affairs Ministry of Uruguay.

**For more information and comments, contact Task Group Chair Fabián Benzo Moreira <fbenzo@vera.com.uy> | https://iupac.org/project/2021-003-1-022**

## Green Chemistry in Sub-Saharan Africa

Twenty years ago, when the book Green Chemistry in Africa (IUPAC project 2002-018-1-300) was prepared, green chemistry was just starting in Africa. Now, it has taken off in a number of institutions and countries, it is generally expanding, and sustainability issues are given increasing attention also at policy-making level. The collaborative book titled "Green Chemistry in Sub-Saharan Africa—growth, challenges and perspectives" is the result of this new project. It is meant to offer a panoramic overview of current achievements, recognized challenges and envisaged near-future developments of green chemistry in Sub-Saharan Africa. The information provided by the overview is expected to be useful for anybody engaged in the promotion of green chemistry, both in Africa and beyond, and to favor the recognition of shared interests in view of collaborations and networking aimed at capacity building strengthening.

Another recently-published IUPAC-endorsed book had also focused on Sub-Saharan Africa (L. Mammino, Biomass Burning in Sub-Saharan Africa: Chemical Issues and Action Outreach, IUPAC project 2007-025-1-300), initiating a tradition of projects concerning green chemistry and sustainability with specific focus on Sub-Saharan Africa.

**For more information and comments, contact Task Group Chair Liliana Mammino <sasdestria1@gmail.com>**
**https://iupac.org/project/2021-005-1-041**

## Categorizing Interactions Involving Group 11 Elements

The recent focus on supramolecular/nanostructured systems drew major attention on chemical interactions and prompted a flurry of terms indicating specific interaction subclasses. This is particularly true for interactions involving group 11 elements. Group 11 elements afford a wide diversity of chemical interactions which differ for the preferentially involved moieties, the geometric/energetic features, the nature of prevailing attractive forces, *etc.* Numerous terms are available in the chemical literature to designate specific subclasses of these interactions. For instance, the so-named aurophilic and argentophilic interactions are typically homonuclear short contacts wherein relativistic effects play an important role while coinage (or regium) bonds can be characterized as heteronuclear short contacts wherein the group 11 element is the electrophile. Inconsistent use of these and related terms sometimes occurs, as it is often the case when several terms are employed by different communities to designate phenomena involving analogous moieties.

**For more information and comments, contact Task Group Chair Giuseppe Resnati <giuseppe.resnati@polimi.it>**
**https://iupac.org/project/2021-006-2-100**

## Recommendations for terms relating to materials characterization: Latin and other introduced terms

Confused about Latin terms in materials characterisation? Having trouble understanding what the conditions of the sample for a reported characterisation were?

This project has the objective to clarify, as well as resolve discrepancies and conflict, regarding Latin terms

used to describe the characterization of materials made under non-ambient conditions, materials within systems, and of materials during change. These include terms such as *ex situ*, *in situ*, and *(in) operando*. The outcome of the project will be a recommendation for specific Latin terms to the IUPAC. This objective will benefit the materials chemistry community and empower IUPAC to make a decision on recommended terms for these. It is intended that the terminology will comply with the VIM and IUPAC Guidelines for Recommendations.

The task group comprises material characterization experts spanning both diffraction and spectroscopy and three Latin scholars. The project will make a recommendation for specific Latin terms to the IUPAC, compliant with IUPAC guidelines.

- Instrumentation & techniques have advanced faster than terms.
- Consistent language is needed to discuss sample characterization conditions.
- We need to clarify & resolve discrepancies for Latin terms describing materials characterization.

Particularly for non-ambient conditions, within systems, and during change.


The task group welcomes input from the broader research communities on further terms to include, particularly those used inconsistently or ambiguously. If you are interested in participating or have an experimental condition or term that you think needs clarification, email to become involved in the project.

**For more information and comments, contact Task Group Chair Vanessa Peterson <Vanessa.Peterson@ansto.gov.au>**
**https://iupac.org/project/2021-009-2-500**

# IUPAC Provisional Recommendations

Provisional Recommendations are preliminary drafts of IUPAC recommendations. These drafts encompass topics including terminology, nomenclature, and symbols. Following approval, the final recommendations are published in IUPAC's journal *Pure and Applied Chemistry* (PAC) or in IUPAC books. During the commentary period for Provisional Recommendations, interested parties are encouraged to suggest revisions to the recommendation's author. https://iupac.org/recommendations/under-review-by-the-public/

## Terminology and the naming of conjugates based on polymers or other substrates

A number of human activities require that certain complex molecules, referred to as active species (drugs, dyes, peptides, proteins, genes, radioactive labels, etc.), be combined with substrates, often a macromolecule, to form temporary or permanent conjugates. The existing IUPAC organic, polymer, and inorganic nomenclature principles can be applied to name such conjugates but it is not always appropriate. These nomenclatures have two major shortcomings: 1) the resulting names are often excessively long and 2) identification of the components (substrate, active species, and link) can be difficult. The new IUPAC naming system elaborates rules for unambiguous and facile naming of any conjugate. This naming system is not intended to replace the existing nomenclature but to provide a suitable alternative when dictated by necessity. Although the rules are intended to be primarily applicable to the naming of polymer conjugates, they are also applicable to naming conjugates with other substrates, which include micelles, particles, minerals, surfaces, pores, etc. The naming system should be used when recognition of the substrate and active substance is essential and will also be useful when constraints of name length make the otherwise preferred IUPAC nomenclatures untenable. The proposed rules for the new naming system are complemented by a glossary of relevant terms.

**Corresponding Author: Michel Vert <michel.vert@umontpellier.fr>**