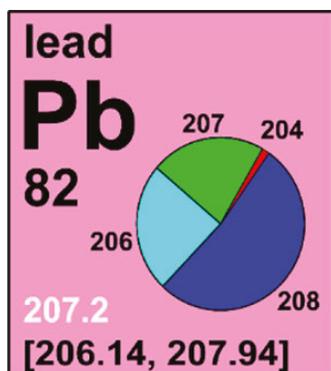


argon and lead have changed to an interval to reflect that the natural variation in isotopic composition exceeds the measurement uncertainty in a specific substance. The standard atomic weights and/or the uncertainties of fourteen elements have been changed



based on the Atomic Mass Evaluations 2016 and 2020 accomplished under the auspices of the International Union of Pure and Applied Physics (IUPAP): Al (aluminium), Au (gold), Co (cobalt), F (fluorine), Ho (holmium), Mn (manganese), Nb (niobium), Pa (protactinium), Pr (praseodymium), Rh (rhodium), Sc (scandium), Tb (terbium), Tm (thulium), and Y (yttrium).

See "TSAW –a lifelong challenge or simply an unsolved mystery?" on page 18.

<https://ciaaw.org>

Terminology and the naming of conjugates based on polymers or other substrates (IUPAC Recommendations 2021)

Michel Vert, Jiazhong Chen, Andrey Yerin, Karl-Heinz Hellwich, Roger C. Hiorns, Richard Jones, Graeme Moad, and Gerard P. Moss

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<https://doi.org/10.1515/pac-2020-0502>

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.

<https://iupac.org/project/2014-034-2-400>

Glossary of terms used in physical organic chemistry (IUPAC Recommendations 2021)

Charles L. Perrin, *et al.*

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This Glossary contains definitions, explanatory notes, and sources for terms used in physical organic chemistry. Its aim is to provide guidance on the terminology of physical organic chemistry, with a view to achieving a consensus on the meaning and applicability of useful terms and the abandonment of unsatisfactory ones. Owing to the substantial progress in the field, this 2021 revision of the Glossary is much expanded relative to the previous edition, and it includes terms from cognate fields.

The first Glossary of Terms Used In Physical Organic Chemistry was published in provisional form in 1979 and in revised form in 1983, incorporating modifications agreed to by IUPAC Commission III.2 (Physical Organic Chemistry). A further revision was undertaken under the chairmanship of Paul Müller, which was published in 1994. The work was coordinated with that of other Commissions within the Division of Organic Chemistry. In 1999, Gerard P. Moss, with the assistance of Charles L. Perrin, converted this glossary to a World Wide Web version. This Glossary has now been thoroughly revised and updated, to be made available as

