

Abstracts PdN-ChiS 8/57

Cyanidation – large-scale way of obtaining gold

T. Münch, R. Demuth

Different ways of obtaining gold are described. Because of its economic importance and its interesting chemistry the cyanidation is the most outstanding of them.

PdN-ChiS 8/57, p.6

Complex phenomena with iron (part 1) - rust: in an everyday life and problem-oriented chemistry classroom

M. Pötter, K. Schwabe

A teaching unit is proposed in which starting from an experimental approach phenomena concerning rust are questioned, evaluated and explained.

PdN-ChiS 8/57, p.9

Complex phenomena with iron (part 2) – inks and knowledge about complexes

M. Pötter, K. Schwabe, W. Proske

A teaching unit on complex compounds is proposed, in which knowledge on complexes is obtained based on experiments with inks.

PdN-ChiS 8/57, p.16

Tracing Alfred Werner – a proposal for the introduction of complex chemistry in Sekundarstufe II

U. Pfangert-Becker

A teaching sequence on complex compounds is introduced, based on a historical problem-oriented introductory phase.

PdN-ChiS 8/57, p.20

Metal complexes in biology and medicine

S. Schmitt

Metal complexes are a classic topic in inorganic chemistry, but also in nature there is a great number of complex compounds. In this article different metallic elements and their ligands are shortly introduced. Above that, the relevance of metal complexes in medical diagnostics and therapy is pointed out and ways of treating them in the chemistry classroom are pointed out.

PdN-ChiS 8/57, p.22

Competences and contexts

Investigating complex compound experimentally

J. Uhlemann, B. Duvinage, U. Schilde

Modified and tested experiments for teaching the structure and properties of complex compounds and their stability in learning stations are described. The worksheets for pupils contain background knowledge, information on necessary material and

chemicals, hints for the procedure and exercises. The online-supplement contains the complete procedures with evaluations and answers to the exercises.

PdN-ChiS 8/57, p.28

Teaching Beginners

The particle model in the subject “science and technology”

K. Hock, J. Weinheimer, B. Rauch, M.A. Anton

The phenomena melting, dissolving and combustion are proposed to pupils from year 5. As an explanation three kinds of models, e.g. Lego, Comic, balls, were offered. The comic was very attractive to the pupils, but no difference could be observed concerning the pupils' learning success.

PdN-ChiS 8/57, p.34

Forum

Harry Potter and the decial of the subject chemistry – a letter to the editor on the article “Chemistry in Harry Potter” – PdN-ChiS 57 (5), p.17 (2008)

M. Trauschke

PdN-ChiS 8/57, p.39

Conserving food in experiments – part 3: Salting using corned beefs as an example

B. Sieve

Salting is one of the oldest ways of food preservation. Tested experiments on salting, on the dependence of the amount of nitrites and the preservation efficiency and on the determination of the amount of nitrites in corned beef are described. A recipe for making corned beef and information on the toxicity of nitrites are also provided.

PdN-ChiS 8/57, p.40

Searching the net on the topic crude oil – chances for a topical and conceptional broadening of the chemistry classroom

T. Baedke, H.-J. Becker

The article shows the chances and potential of the internet for providing information for the chemistry classroom. The charts developed can be used in the chemistry classroom and regarded from different methodological and didactic perspectives.

PdN-ChiS 8/57, p.44

Proteins – more than pure components of food

R. Heimann, K. Schuckmann

This article describes an experimental approach to finding out that wool consists of proteins, which can be split into amino acids. The great variety of proteins is pointed out. The teaching unit is suitable for year 10.

PdN-ChiS 8/57, p.47