



Education and Culture

Lifelong Learning Programme



VŠCHT  
PRAHA



# Chemie všude kolem nás

# Chemistry is all around us

# „CIAAU“

## Podpora celoživotního učení v chemii

<http://www.vscht.cz/homepage/veda/index/CIAAU>



# O čem projekt CIAAU je ?

1.3.2010 – 28.2.2011

- Projekt je zaměřený na podporu celoživotního vzdělávání v **chemii**
- Chce ukázat chemii v pozitivním světle a hledat netradiční způsoby jejího vyučování
- Je určen především pro středoškolské učitele a jejich žáky
- Je financovaný Evropskou komisí prostřednictvím Výkonné agentury pro vzdělávání, kulturu a audiovizuální oblast (EACEA) v rámci programu **Leonardo da Vinci**
- Je řešen partnery ze šesti zemí EU, jedním z nich je VŠCHT Praha









# <http://www.chemistry-is.eu/>

Podpora evropské spolupráce v oblasti vzdělávání a celoživotního učení



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Homepage

## The "Chemistry is all around us" Project

# Struktura a informace v projektu

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■ Transnational Report

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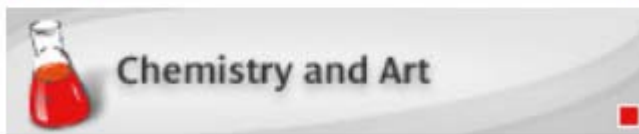
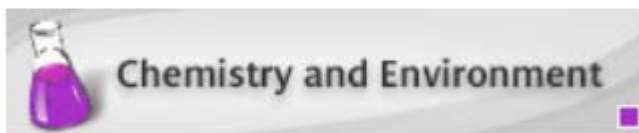
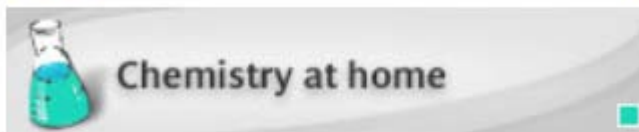
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■ Publications

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■ Initiatives

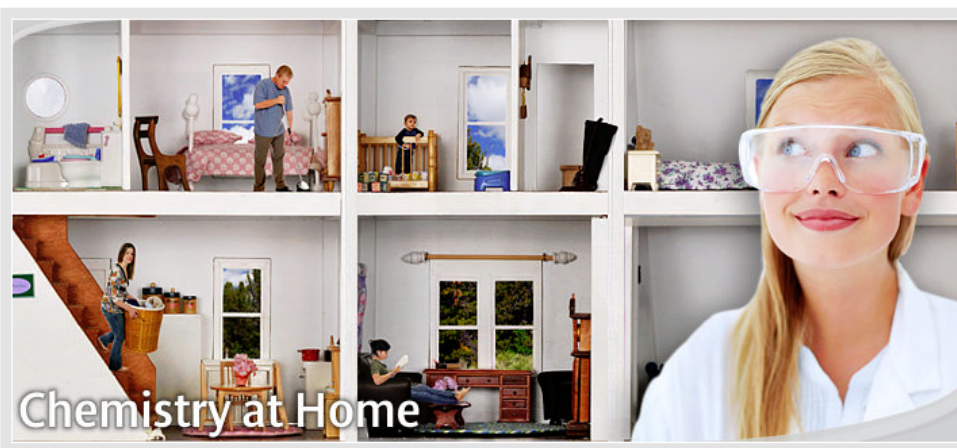
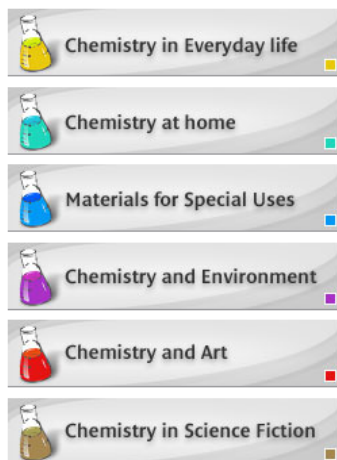
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# Chemie v domácnosti

<http://www.chemistry-is.eu/>



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## Chemistry at Home

Chemical substances in foods

Cleaning products at home

### Chemical substances in foods

#### Introduction

#### Nutrients in foods



Foods contain six types of nutrients. Carbohydrates, fats, proteins, vitamins, minerals and trace-elements, and water are considered nutrients. Sufficient quantities of these nutrients are

Introduction

Activities  
Step 1 - Step 2

Exercises  
Step 1 - Step 2

Relevant Links

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# Chemie a umění

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- Testimonials

## Chemistry and Art

Chemical Analysis of Historical Materials and Cultural Heritage Objects

Chemistry and Metal Objects of Cultural Heritage

### Chemical Analysis of Historical Materials and Cultural Heritage Objects

#### Introduction

**Chemistry and Hidden Secrets of Historical Objects**  
Every person is looking for explanations for current events in the past, learns from the past, searches for roots and the information that would bring new ideas into his or her life. Any object, which withdraws from the depths of the past, tells the story of its origin, of technology that was used to make it, of habits and lives of people

- Introduction
- Activities
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# Aktivity - cvičení



Fig. 9



Fig. 10

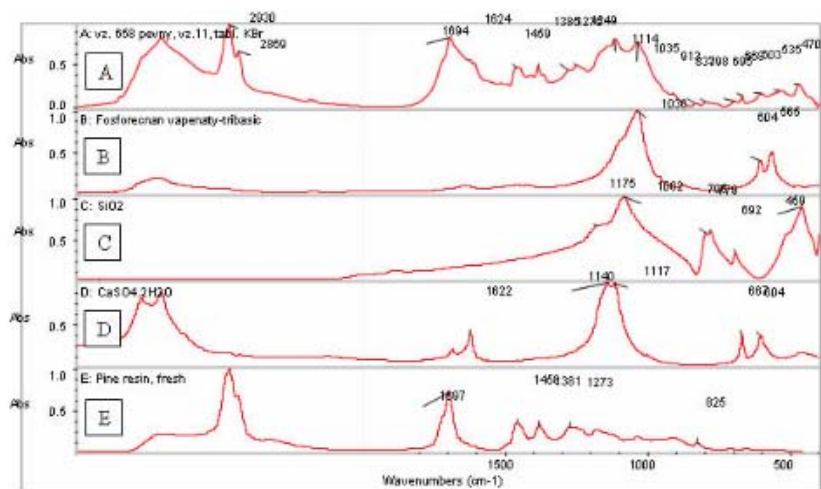
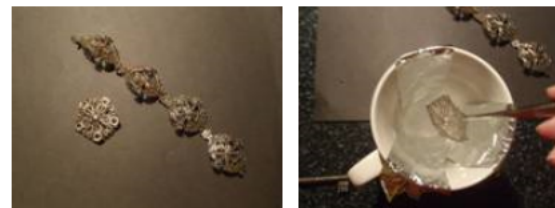
## Chemistry and Metal Objects of Cultural Heritage

### Step 1 - Activities

Give two spoons of salt into a cap and fill the cap with hot water. After the dissolving of the salt, put into the cap a piece of aluminium foil and old silver jewellery. Observe the clearing of silver accompanied by aluminium dissolving.

Aluminium is a less noble metal than silver. When oxidized silver and aluminium are conductively connected, the oxidation of aluminium and reduction of silver take place. The conductive connection is performed by water and salt.

### Clearing of silver accompanied by aluminium dissolving:



# TEST - co jste se naučili ?

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## Chemistry and Art

Chemical Analysis of Historical Materials and Cultural Heritage Objects

Chemistry and Metal Objects of Cultural Heritage

### Chemistry and Metal Objects of Cultural Heritage

#### Step 1 - Exercises

Which material could not be used for baroque statue?

- copper
- aluminium
- bronze
- wrought iron
- brass

Check

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# CIAAU



<http://www.chemistry-is.eu/>

I Vy se můžete připojit se svými názory, zkušenostmi nebo nápady k řešení projektu.

Vaše příspěvky můžete zasílat na e-mailovou adresu [petra.kinzlova@vscht.cz](mailto:petra.kinzlova@vscht.cz)

Informace v češtině naleznete na stránce

<http://www.vscht.cz/homepage/veda/index/CIAAU>

Děkujeme za pozornost !

Anna Mittnerová, Oddělení pro vědu a výzkum VŠCHT Praha

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