

iz naših knjižnica

Uređuje: Danko Škare

General Chemistry online

I. Tokić

INA-Sektor strateškog razvoja, istraživanja i investicija

INDOK

e-mail: ivo.tokic@ina.hr

Na adresi <http://antoine.frostburg.edu/chem/senese/101/index.shtml> nalaze se internetske stranice *General Chemistry Online*. Njihov je autor Frederick A. Senese, danas izvanredni profesor na Odsjeku za kemiju Frostburg State University u SAD, a ranije i znanstvenik-istraživač u Nasi i na Cornell Theory Centeru. Uz kemiju, bavi se još uređivanjem i dizajnom mrežnih sadržaja, a najpoznatiji i najnagrađivaniji je svakako upravo ovaj.

Na početnoj stranici ovoga mesta na internetu nalaze se pregleđeno izložene glavne skupine sadržaja:

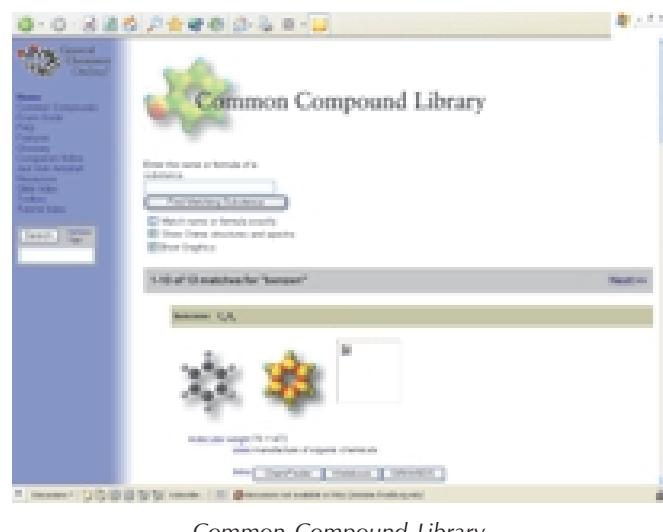
- Common Compound Library
- Companion Notes
- Features
- Resources
- Toolbox
- Tutorials
- Just Ask Antoine!
- Frequently Asked Questions
- Glossary
- Trivia Quiz
- Chemistry Exam Survival Guide

Osim njih, koje se ponavljaju i u lijevom okviru koji nam je uviјek na raspolaganju pri navigaciji po stranicama, tu je još i rubrika *What's new*, koja donosi sažetu novost o ponekoj temi iz područja kemije, te na samom dnu *Subscribe*, mjesto gdje se može prijaviti za dobivanje besplatnog mjesečnog biltena o novim sadržajima na stranicama.

The screenshot shows the homepage of General Chemistry Online. At the top, there is a navigation bar with links like Home, General Compound Library, Companion Notes, Features, Resources, Toolbox, Tutorials, Just Ask Antoine!, Frequently Asked Questions, Glossary, Trivia Quiz, and Chemistry Exam Survival Guide. Below the navigation bar, there is a large logo for "General Chemistry Online!" featuring a stylized molecular structure. To the right of the logo, there is a search bar and a link to "What's new". The main content area contains several sections: "Common Compound Library" (with a link to "Search for a compound"), "Companion Notes" (with a link to "What's new"), "Features" (with a link to "What's new"), "Resources" (with a link to "What's new"), "Toolbox" (with a link to "What's new"), "Tutorials" (with a link to "What's new"), "Just Ask Antoine!" (with a link to "What's new"), "Frequently Asked Questions" (with a link to "What's new"), "Glossary" (with a link to "What's new"), "Trivia Quiz" (with a link to "What's new"), and "Chemistry Exam Survival Guide" (with a link to "What's new"). At the bottom of the page, there is a section titled "What's new" with a link to "Subscribe".

General Chemistry Online: homepage

U rubrici *Common Compound Library* nalazi se pretražljiva baza podataka s više od 800 uobičajenih imena spojeva, formula, struktura i svojstava. Nakon postavljanja upita, za što je pripremljen jednostavan mrežni obrazac, u kojem se za pretraživanje upisuje naziv ili formula tvari, a kao rezultat može se dobiti njezin naziv, formula, struktura i spektar te njezin grafički prikaz.



Common Compound Library

Ali uz te podatke postoje još i veze na tri druga izvora koja su povezana s traženom tvari. Na taj se način odmah povezujemo ili na ChemFinder ili na NIST Webbook (za što je niže dan primjer) ili na SIRI MSDS. Tako možemo o traženoj tvari dobiti daleko potpuniju informaciju i potražiti dodatne specijalizirane podatke, kao što su podaci o kemijskim sinonimima, molekularnoj težini, strukturi, termodinamičkim svojstvima, svakodnevnoj uporabi pa konstantama itd. Uz to, mogu se naći svojstva izražena u raznim mjernim jedinicama. I još, prikaz strukture može se rotirati po tri dimenzije što mu daje novu kvalitetu.

Taj se sadržaj još uvijek širi dodavanjem novih spojeva, a što je posebno zanimljivo, oni se dodaju zbog korisničkih zahtjeva.

Rubrika *Features* donosi zanimljive crtice iz svijeta znanosti. Trenutno se na znanstveno-popularan način odgovara na nekoliko pitanja poput:

– Blissova molekula: što želja za čokoladom, zaboravni miš, sretne svinje i rodnost imaju zajedničko? – ili:

– Voda u vino: kako gotovo isti pigmenti čine ruže crvenima, a ljubičice plavima?

The screenshot shows the NIST Chemistry Webbook website. The top navigation bar includes links for "Search Database", "Data Tables", "Data Services", "Value Services", and "Chemical Webbook". Below the header, a blue banner reads "Welcome to the NIST Chemistry Webbook!". A sub-banner below it says "You can search here for substances, view their properties and see how they fit into the framework of chemistry." The main content area features a section titled "Benzene" with a brief description and a link to "View details". To the right of this is a circular icon containing a molecular structure of benzene. Further down, there's a "Properties" section with a table showing various physical and chemical properties of benzene, such as its density, melting point, boiling point, refractive index, and vapor pressure. At the bottom of the page, there's a footer with links to "About", "Feedback", "Help", "Contact Us", and "Privacy Statement".

Veza na NIST Chemistry WebBook i traženi podaci

A screenshot of Microsoft Internet Explorer 6.0. The title bar reads "Internet Explorer 6.0 - Previous Features". The menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar contains icons for Back, Forward, Stop, Home, Refresh, and Favorites. The address bar shows the URL "http://www.microsoft.com/windows/previousfeatures/0000.htm". The main content area features a large heading "Previous Features" with a drop shadow. Below it is a list of five items, each with an icon and a brief description:

- The Published Results**: Microsoft Internet Explorer helps you share results.
- Search Everywhere**: Find what you're looking for across the web.
- Smart or Safe**: Microsoft Smart Search suggests better search and search Smart & Safe to find what you're looking for.
- Find and Form**: Smart search for answers! Find answers from other users (FAQ).
- The Other Windows**: Smart & Shareable storage. Explore sites. Share pages and writing from one context!

A horizontal line with the text "Internet Explorer Features" follows. At the bottom, there's a link to "Explore and try our features" and a "Feedback" link.

Features

Na ovim se stranicama može naći i glosar kemijskih pojmove. Do značenja se dolazi ili upisivanjem traženog pojma u tražilicu ili preko abecednog popisa pojmove koji se pretražuju po temama kao što su npr. mjerenja; atomi, elementi i ioni; molekule i spojevi; plinovi; reakcije u otopinama, itd.

General Chemistry Glossary

Rubrika koja je posebno zanimljiva jest *Just Ask Antoine!*, koja nudi u svojoj arhivi spremne odgovore na oko 400 pitanja iz područja opće kemije. Pitanja, odnosno odgovori mogu se pretraživati najprije po sljedećim skupinama: posljednja postavljena pitanja; najpopularnija pitanja; omiljena pitanja i pitanja razvrstana po različitim temama.

Just Ask Antoine!	
<p>The original chemistry question? Antoine has it answered. Just, click the button of more than 200 previously answered questions where they already lie.</p>	
<p>Recent questions</p> <p>Recent questions:</p> <ul style="list-style-type: none"> • #1001: Compare the following coordination reactions • #1002: Compare the following coordination reactions • #1003: Compare the following coordination reactions • #1004: In the following reaction, are all elements that could react also at least one element that does not react? • #1005: Compare the following coordination reactions • #1006: What is a coordination complex? • #1007: oxidation states • #1008: Compare the following coordination reactions • #1009: Compare the following coordination reactions • #1010: Is the reaction? <p>Most popular questions:</p> <ul style="list-style-type: none"> • #1001: What is a coordination complex? • #1002: Compare the following coordination reactions • #1003: What is a coordination complex? • #1004: In the following reaction, are all elements that could react also at least one element that does not react? • #1005: What is a coordination complex? • #1006: What is a coordination complex? • #1007: What is a coordination complex? • #1008: What is a coordination complex? • #1009: What is a coordination complex? • #1010: Is the reaction? <p>Most active questions:</p> <ul style="list-style-type: none"> • #1001: What is a coordination complex? • #1002: Compare the following coordination reactions • #1003: What is a coordination complex? • #1004: In the following reaction, are all elements that could react also at least one element that does not react? • #1005: What is a coordination complex? • #1006: What is a coordination complex? • #1007: What is a coordination complex? • #1008: What is a coordination complex? • #1009: What is a coordination complex? • #1010: Is the reaction? 	<p>Recent unanswered questions</p> <p>Recent unanswered questions:</p> <ul style="list-style-type: none"> • #1001: What is a coordination complex? • #1002: Compare the following coordination reactions • #1003: What is a coordination complex? • #1004: In the following reaction, are all elements that could react also at least one element that does not react? • #1005: What is a coordination complex? • #1006: What is a coordination complex? • #1007: What is a coordination complex? • #1008: What is a coordination complex? • #1009: What is a coordination complex? • #1010: Is the reaction?

Just Ask Antoine!

Na tu se rubriku odmah može nadovezati i rubrika FAQ (Frequently Asked Questions), pod punim naslovom *General Chemistry Questions & Answers*. Do sažetih odgovora s jasnim i bitnim informacijama dolazi se isključivo pretraživanjem po područjima.

Reaction rates:
Frequently asked questions

First order reactions

- How can I calculate the rate of a first order reaction?

Rate laws

- What is the law for the reaction of sulfuric acid with barium hydroxide?

Reaction mechanisms

- What are the kinetics of the reaction between sodium iodide and hydrogen peroxide?

Reactions in aqueous solution

- Why do hydrolysis reactions take typically longer at higher pH?

Stepwise reactions

- How to calculate the rate of a stepwise reaction?

Temperature and reaction rate

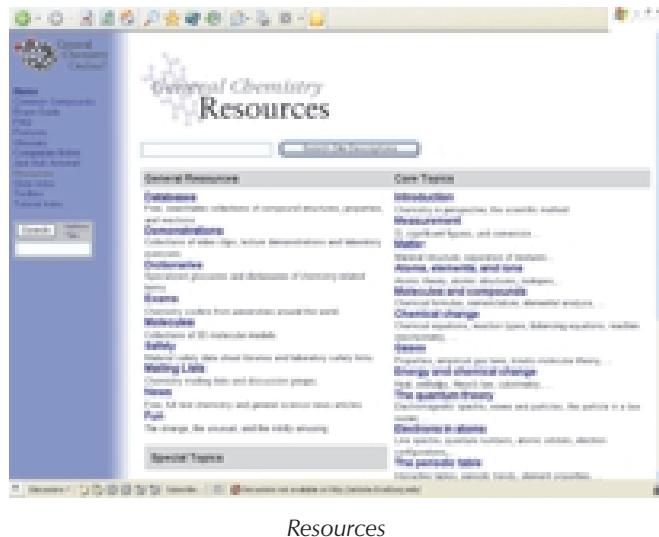
- What can accelerate the activation energy for catalyzed decomposition of hydrogen peroxide?
- What are examples of resonance effects in reaction rates?
- Does a 10% temperature rise double reaction rates?

General Chemistry Questions & Answers – FAQ

Od ostalih sadržaja na ovim stranicama vrijedi izdvijati *Toolbox* u kojem se nalaze neki alati za izračunavanje svojstava spojeva, crtanje kemijskih grafova, interaktivni periodni sustav elemenata, i dr.

Posebno je vrijedna rubrika *Resources*, u kojoj se navode veze na izvore informacija o pojedinim temama vezanim za opću kemiju, ali i o nekim bazama podataka (s podacima o strukturama spojeva, svojstvima i reakcijama), demonstracije po pojedinim pitanjima, ispitima (kemijski ispit s raznih sveučilišta širom svijeta), molekulama (trodimenzionalnim modelima), o sigurnosti u radu, raznim novostima vezanim za kemiju, forumima, riečnicima i sl.

Na stranicama se nalazi i *Tutorial Index* koji vodi do organiziranih tutorijala o pojedinim temama, ali i posebno pripremljenim kvizovima znanja iz raznih područja ili po pojedinim problemima.



Resources

Moguće je i komentirati sadržaje stranica, uputiti neki savjet autoru ili na drugi način pomoći da on bude bolji. Tako je i izvjesni A.Trojani, da istaknemo jedan zanimljiv primjer, napisao kako mu se ne svida site jer on ne želi pretraživati po gotovim pitanjima, već želi pitati vlastitim riječima te savjetuje da se nađe mjesto na kojem bi mogao postaviti svoje vlastito pitanje. Ipak, uatoč tome nedostatku mnogi drugi drže su ovo izvrsne stranice, posebno za one koji podučavaju kemiju ili koji usvajaju znanja iz te znanosti ili koji se općenito bave educiranjem. Tako su nagrade i priznanja za njihovu kvalitetu zaista brojna. Teško je i nabrojiti sve koji su ih nagrađili ili pohvalili te ih koriste i preporučuju (svaki prema svojim kategorijama i kriterijima), a među njima su nama najčuveniji časopis Chemistry, American Chemical Society (ACS), Scientific American, Science and Technology, Institute for Scientific Information (ISI), Discovery Channel School, New Scientist, European Council of International Schools, Encyclopedia Britannica, Argus Clearinghouse, Edunet Choice, MS Encharta Encyclopedia, itd.

To su svakako dobre preporuke da se neki put rješenja za pojedina pitanja potraže i na tim stranicama – ili drugačije rečeno: Just ask Antoine!

iz hrvatskih znanstvenih časopisa

SADRŽAJI RECENTNIH BROJEVA

PERIODICUM BIOLOGORUM

CONTENTS	Vol. 105,	No 2,	P. 99–200,	2003
----------	-----------	-------	------------	------

REVIEW

- 99 Biomedical and environmental potential of nanoporous materials
Marijeta Kralj

OVERVIEW

- 109 Hepatocyte culture: an important model for biochemical and toxicological studies
Roberta Petlevski

ORIGINAL SCIENTIFIC PAPERS

- 115 Cross-talk between inositol lipid signalling systems localized in renal brush-border and basal-lateral plasma membranes
Vladiana Crljen and Hrvoje Banfić
- 119 Effect of the androgen analogue mibolerone on migration and maturation of bursal cells in chickens
Jayant K. Bhanushalli and William L. Ragland
- 125 Effects of free fatty acids on insulin stimulated amino acid transport in cultured rat hepatocytes
Jagoda Roša and Josip Roša
- 131 Analgesic effect of antidepressant clomipramine on mice
Lidija Bach-Rojecky and Ita Samardžija

- 137 Synthesis, structure and biological activity of 3-substituted derivatives of 4-hydroxycoumarin
Davorka Završnik, Fahra Bašić, Fahir Bećić, Ervina Bećić and Sead Jažić
- 141 Improved stimulation of motor nerve using quasitrapezoidal stimulating pulses
Matjaž Bunc, Dušan Šuput and Janez Rozman
- 147 Immune response to influenza vaccine (A/New Caledonia/20/99 (H_1N_1)-like, A/Moscow/10/99 (H_3N_2)-like, and B/Beijing/184/93+ B/Yamanashi/166/98-like) in the elderly
Vladimir Draženović, Ankica Ilić, Renata Sim, Jadranka Božikov and Gordana Mlinarić-Galinović
- 153 Effects of hyperbaric oxygenation after partial hepatectomy in young rats
Tina Tičinović Kurir, Tatjana Zemunik, Mirko Petričević, Nadan Petri, Saša Radić, Ivana Dujmov, Vedrana Čikeš, Božo Bota, Eugenija Marušić, Mirna Saraga-Babić, Maja Tomasović and Anita Markotić
- 157 Histopathological changes in the gill of the fresh water snail *Amphimelania holandri* Fer. (Gastropoda, Prosobranchia) exposed to phenol
Jasna Lajtner, Radovan Erben, Goran Igor Vinko Klobučar, Ivana Maguire and Andreja Lucić