

SciFinder, najkompleksniji sekundarni izvor informacija za hemiju i srodne naučne oblasti

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Sažetak (apstrakt):

U uvodnom delu rad prati sekundarne izvore informacija za hemiju i srodne naučne oblasti od prve polovine devetnaestog veka do danas. U drugom delu su prikazane mogućnosti pretraživanja u SciFinder-u .

Ključne reči: Sekundarni izvor informacija, hemija, pretraživanje, SciFinder, sažetak (apstrakt), originalni dokument

Metode: Istorijska, deskriptivna.

U V O D

Razvojem nauke početkom XIX veka javila se potreba za sekundarnim izvorima informacija. Za oblast hemije i srodnih nauka prvi redovan izvor je bio časopis CHEMISCHES ZENTRALBLATT (1830). Sedamdesetih godina je časopis JOURNAL OF THE CHEMICAL SOCIETY uz originalne radove počeo da referiše radove iz drugih časopisa, mahom iz nemačkog BERICHTE DER DEUTSCHEN CHEMISCHEN GESELSCHAFT.

Posle Prvog svetskog rata počela je da izlazi nemačka enciklopedija BEILSTEINS HANDBUCH DER ORGANISCHEN CHEMIE, koja je referisala radove iz organske hemije.

Posle Drugog svetskog rata u Sovjetskom Savezu izlazi niz periodičnih publikacija koje referišu radove iz raznih oblasti. Najznačajniji je REFERATIVNYJ ŽURNAL. Iz oblasti hemije on je, za razliku od CHEMICAL ABSTRACT-a, više referisao s istočnog dela planete (Japan i dr.), a za radove koji su Zapadu bili nedostupni CA je samo preneo podatak preuzet iz njega.

Godine 1907 počeo je da izlazi časopis CHEMICAL ABSTRACT. Sve do 1972. godine korisnicima su bila na raspolaganju samo tri indeksa: Autor, Subject i Formula, kada, zbog velikog broja organskih jedinjenja, počinje da izlazi Chemical substance index. Nešto pre toga počeli su da izlaze Index Guide, Registry Number Index i HAIC (Hetero-Atom-In-Context), za lakšu identifikaciju jedinjenja. Od 1980. godine izlazi Patent Index.

Osamdesetih godina prošlog veka Chemical Abstract je mogao da se nabavlja na disketama.

Institut ekonomskih nauka je 1989. godine imao onlajn pristup bazi Chemical Abstracta i mogla se naručiti pretraga, koju su radili zaposleni u Institutu. Mogućnosti pretrage nisu bile ni približne današnjim mogućnostima, a, naravno, nije bilo ni linkova do originalnih radova.

SciFinder

Dostupnost bazi SciFinder preko KoBSON omogućeno je od 2003. godine. Prvobitno je bilo preko Client verzije samo akademskim ustanovama (SciFinder Shoolar) i to ni za kakvu komercijalnu upotrebu, čak ni za pisanje patenata.

Krajem 2011. godine prelazi se na web verziju, a od 2012. jedino se ona može koristiti.

Baza SciFinder je danas najkompleksnija za pretraživanje postojećih radova iz hemije i srodnih grana nauke.

Pretraga je moguća na tri načina:

- u odnosu na radove
- u odnosu na supstance
- u odnosu na strukturu reakcije.

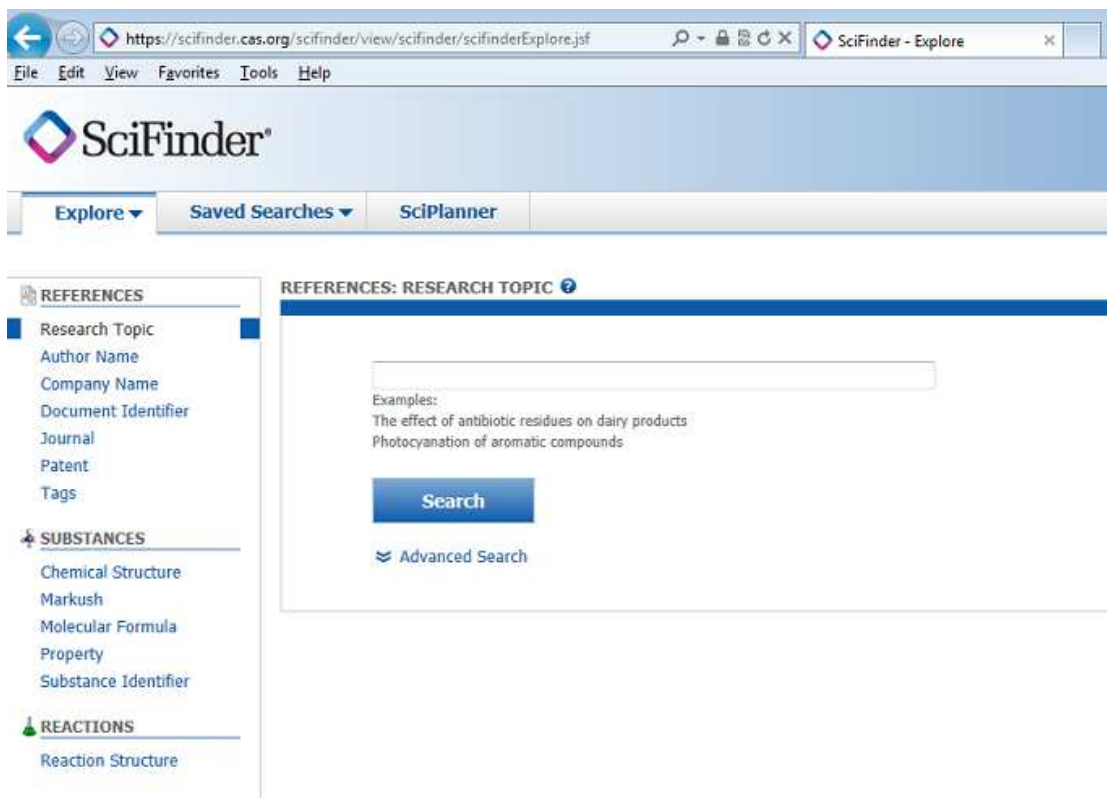
Pretraga u odnosu na radove je moguća:

- prema temi
- po autorima
- po kompanijama
- prema identifikacionom broju apstrakta
- po časopisu
- po patentima.

U odnosu na supstance:

- prema strukturi
- molekulskoj formuli
- osobinama supstance
- identifikacionom broju supstance

(sl. 1)



sl. 1

Pretraga po temi (Research topics)

Pretraživanje prema temi ostavlja mogućnost pretraživanja po ključnim rečima, ali sa velikom verovatnoćom da rezultat pretrage bude veliki broj referisanih radova. Kao primer se navode fraze.

Ako koristimo navedeni primer „The effect of antibiotic residues on dairy products“ dobićemo 156 referenci u kojima su koncepti „antibiotic residues“ i „dairy products“ povezani, a 310 gde se oba pojavljuju.

(sl. 2)

Research Topic "The effect of antibiotic resid..."

REFERENCES 0

Select All Deselect All

0 of 4 Research Topic Candidates Selected

- 156 references were found containing the two concepts "antibiotic residues" and "dairy products" closely associated with one another.
- 310 references were found where the two concepts "antibiotic residues" and "dairy products" were present anywhere in the reference.
- 6548 references were found containing the concept "antibiotic residues".
- 424801 references were found containing the concept "dairy products".

Get References

sl. 2

Pretraživanje prema autoru

Ako želimo da pretražujemo radove nekog autora čije je prezime rasprostranjeno (Smith, Jovanović, Wang), čak i da znamo inicijal imena, treba pogledati mnogo autora.

(sl. 3)

The screenshot shows the SciFinder interface in a web browser. The address bar displays the URL <https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf>. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The SciFinder logo is prominently displayed at the top. Below the logo, there are navigation tabs for 'Explore', 'Saved Searches', and 'SciPlanner'. A search input field contains the text 'Author Name "Jovanovic, S"'. Underneath, a 'REFERENCES' section is visible. The main content area features a 'Select All Deselect All' header and a status line indicating '0 of 85 Author Name Candidates Selected'. A list of 85 candidate names follows, each with a checkbox to its left. The names include variations of 'JOVANOVIĆ' with initials (S, S A, S B, S D, S DJ, S I, S L, S LJ, S M, S P, S S, S V, S Z) and full names (SANDRA, SANJA, SANJA MANITASEVIC, SANTA S, SANTA SUZANA, SANTA SUZANA S, SASA, SASCHA, SASCHA A, SASHA A, SAVO, SAVO M, SERGIJE, SIMA).

sl. 3

Želimo da proverimo sve radove autora Valentić Nataše. Moramo da selektujemo sve četiri varijante potpisa u radovima.

(sl. 4)

The screenshot shows a web browser window with the URL <https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf>. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The SciFinder logo is prominently displayed at the top. Below the logo, there are navigation tabs for 'Explore', 'Saved Searches', and 'SciPlanner'. The search criteria are set to 'Author Name "Valentic, N"'. A 'REFERENCES' tab is active, displaying a list of author name candidates. At the top of the list, there are links for 'Select All' and 'Deselect All', and a status indicator '0 of 6 Author Name Candidates Selected'. The list includes the following entries, each with a checkbox:

- VALENTIC N**
- VALENTIC N V
- VALENTIC NATASA
- VALENTIC NATASA V
- VALENTIC NICOLAS
- VALENTIK N M

At the bottom of the list is a button labeled 'Get References'.

sl. 4

Pretraživanje po časopisu

Ovo pretraživanje omogućava pretragu za autora u nekom časopisu, ali i sve radove u nekom broju.

Ne podržava pretragu po ISSN.

(sl. 5)

SciFinder - Explore

File Edit View Favorites Tools Help

SciFinder®

Explore Saved Searches SciPlanner

Author Name "Valentic, N"

REFERENCES

- Research Topic
- Author Name
- Company Name
- Document Identifier
- Journal**
- Patent
- Tags

SUBSTANCES

- Chemical Structure
- Markush
- Molecular Formula
- Property
- Substance Identifier

REACTIONS

- Reaction Structure

REFERENCES: JOURNAL ?

Journal Name *

Volume Issue Starting Page

Title Word(s)

Examples: Antibiotic

Author Last Name * First Middle

Publication Year

Examples: 1995, 1995-1999, 1995-, -1995

Search

sl. 5

Pretraživanje патенata

Pretraživanje po patentima je moguće za autore ili zastupnike u određenom periodu, ali i direktno ako znamo broj patenta.

(sl. 6)

The screenshot shows the SciFinder web application interface. At the top, there is a browser address bar with the URL <https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf> and the page title "SciFinder - Explore". Below the browser bar is the SciFinder logo and a navigation menu with "Explore", "Saved Searches", and "SciPlanner" options. The main content area displays "Author Name 'Valentic, N'" and a search form titled "REFERENCES: PATENT". The search form includes the following fields:

- Patent Number:** A text input field with examples: "WO 2001011365".
- Assignee Name:** A text input field with examples: "Cancer Research Technology Limited".
- Inventor Last Name *:** A text input field.
- First:** A text input field.
- Middle:** A text input field.
- Publication Year:** A text input field with examples: "1995, 1995-1999, 1995-, -1995".

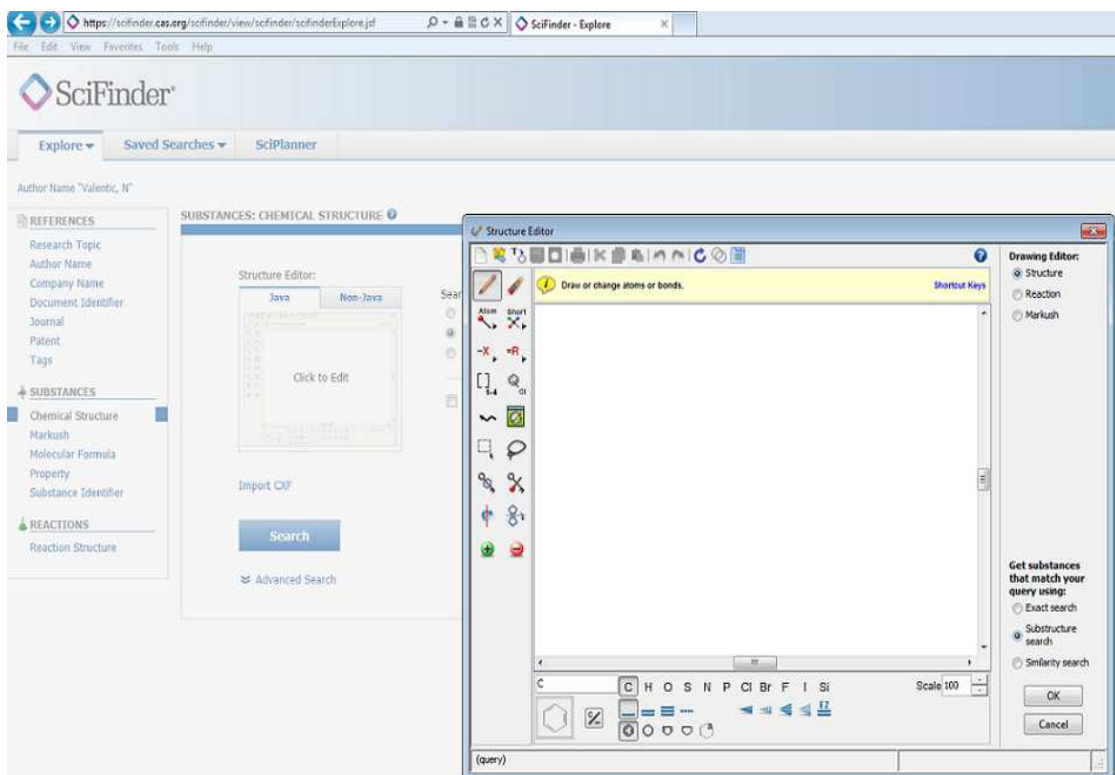
A blue "Search" button is located at the bottom of the search form. On the left side of the interface, there is a sidebar menu with categories: "REFERENCES" (with sub-items: Research Topic, Author Name, Company Name, Document Identifier, Journal, Patent, Tags), "SUBSTANCES" (with sub-items: Chemical Structure, Markush, Molecular Formula, Property, Substance Identifier), and "REACTIONS" (with sub-item: Reaction Structure). The "Patent" option under "REFERENCES" is currently selected.

sl. 6

Pretrage u odnosu na supstance

Za pretrage koje se odnose na supstance ili reakcije SciFinder pruža mogućnost pretrage uz pomoć nacrtane strukture ili reakcije.

(sl. 7)



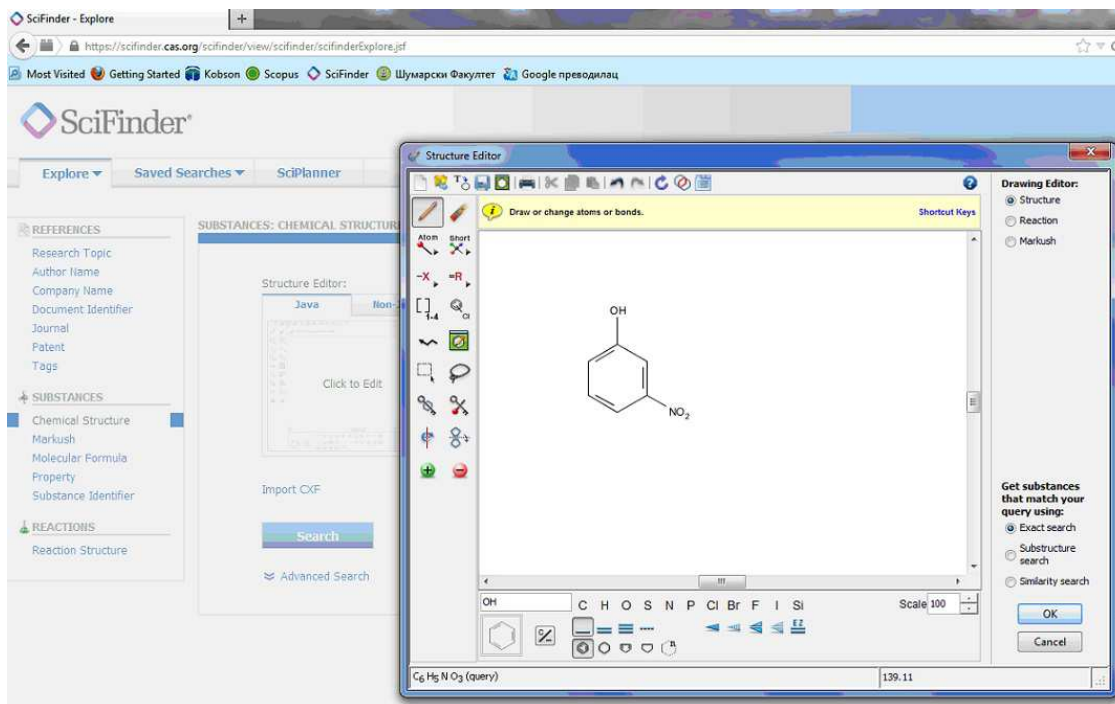
sl. 7

Za primer ćemo uzeti literaturni rad koji bi trebalo da uradi student iz predmeta Organska hemija.

Literaturni rad može biti da za određenu supstancu nađe: sintezu, sve laboratorijske postupke, metode prečišćavanja, podatke o karakterizaciji ili primenu.

U našem primeru treba pronaći sintezu 3-nitrofenola. Prvo ćemo nacrtati njegovu strukturu.

(sl. 8)



sl.8

Dobićemo izbor između tražene i srodnih supstanci.

Kada smo odabrali našu supstancu (prva) vidimo da postoji 4946 radova u kojima se pominje. (sl. 9)

The screenshot shows the SciFinder Substance Answer Set page for 3-nitrophenol. The page displays a list of six substance details, each with a chemical structure and associated data. The first substance is 3-nitrophenol (C₆H₅NO₃) with 4946 references. The second is 3-nitrophenol ion (C₆H₄NO₃⁻) with 100 references. The third is 3-nitrophenol sodium salt (C₆H₄NO₃Na) with 63 references. The fourth is 3-nitrophenol (C₆H₅NO₃) with 30 references. The fifth is 3-nitrophenol (C₆H₅NO₃) with 22 references. The sixth is 3-nitrophenol (C₆H₅NO₃) with 14 references. The page also includes a sidebar with analysis options and a top navigation bar.

sl.9

Posle odabira supstance biramo Get references, pa u novom prozoru Product. Sada nam daje 88 radova.

(sl. 10).

Chemical Structure exact > substances (201) > get reactions (88)

REACTIONS Get References Tools

Analyze Refine

Analyze by: Reagent (New)

HCl	15
H ₂ O	12
O ₂	12
H ₂ O ₂	7
CsOH	6
NaCl	6
NaOH	5
H ₂ SO ₄	4
KOH	4
MnCl ₂	4

[Show More](#)

Group by: No Grouping Sort by: Accession Number

0 of 88 Reactions Selected

1. [View Reaction Detail](#) [Link](#) [Similar Reactions](#)

Single Step *Hover over any structure for more options.*

Oc1ccc([N+](=O)[O-])cc1I → Oc1ccc([N+](=O)[O-])cc1 **97%**

Overview

Steps/Stages

1.1 R:NaOH, C:Cu(OH)₂, C:HOCH₂CO₂H, S: S: DMSO, 6 h, 120°C; 120°C → rt
1.2 R:HCl, S:H₂O, rt, pH 1

Notes

Schlenk tube used (stage 1), Reactor one step: 2

References

Copper(II)-Catalyzed Hydroxylation of
By Xiao, Yan et al
From Journal of Organic Chemistry, 78(11),

2. [View Reaction Detail](#) [Link](#) [Similar Reactions](#)

Single Step *Hover over any structure for more options.*

Oc1ccc([N+](=O)[O-])cc1B(O)O → Oc1ccc([N+](=O)[O-])cc1 **87%**

sl. 10

Sužavanje

Kod svakog načina pretrage postoji mogućnost sužavanja. Ako smo, na primer, odabrali radove jednog autora, prva opcija je ukrštanje s nekim od koautora, filtriranje (refine) s temom, autorom, kompanijom, vrstom dokumenta, godinom izdanaja ili jezikom (sl. 11) ili naučnom oblasti.(sl. 12)

https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf

SciFinder - Reference Answ...

File Edit View Favorites Tools Help

SciFinder

Explore Saved Searches SciPlanner

Author Name "Valentic, n" > references (20)

REFERENCES

Get Substances Get Reactions Get Related Citations Get Full Text Tools

Analyze Refine Categorize Sort by: Accession Number

0 of 20 References Selected

Refine by:

- Research Topic
- Author
- Company Name
- Document Type
- Publication Year
- Language
- Database

Research Topic

Examples:

The effect of antibiotic residues on dairy products

Photocyanation of aromatic compounds

Refine

- Quantum mechanical and spectroscopic (FT-IR, 13C, 1H NMR and UV) investigations of potent antiepilepti**
By Vitnik, Vesna D.; Vitnik, Zeljko J.; Banjac, Nebojsa R.; Valentic, Natasa V.; Uscumlic, Gordana S.; Juranic, Ivan O.
From Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy (2014), 117, 42-53. | Language: English, Database:
This study represents an integrated approach towards understanding the vibrational, electronic, NMR, and s
equil. geometry, bonding features, and harmonic vibrational frequencies have been investigated with the hel
exptl. values. The ¹H and ¹³C NMR (NMR) chem. shifts of the mol. were calcd. by the Gauge-Invariant AO (I
The results show that ED in the σ^* and n^* antibonding orbitals and second order delocalization energies E(2
and LUMO energies, were calcd. by Time-Dependent DFT (TD-DFT) approach. To est. chem. reactivity of th
- Solvent effects on the absorption spectra of potentially pharmacologically active 5-alkyl-5-arylhydantoin**
By Hmuda, Sleem F.; Banjac, Nebojsa R.; Trisovic, Nemanja P.; Bozic, Bojan D.; Valentic, Natasa V.; Uscumlic, Gordana S.
From Journal of the Serbian Chemical Society (2013), 78(5), 627-637. | Language: English, Database: CAPLUS
To obtain insight into the interactions of potential anticonvulsant drugs with their surrounding, two series (I
solvents. The effects of solvent dipolarity/polarizability and solvent-solute hydrogen bonding interactions on
specific and non-specific solvent-solute interactions were correlated with the corresponding absorption, di
generate new equations, which demonstrate the reasonable relationships between the solvent-solute interac
- Oxaprozin: synthesis, SAR study, physicochemical characteristics and pharmacology** Full Text
By Bozic, Bojan Dj.; Trisovic, Nemanja P.; Valentic, Natasa V.; Uscumlic, Gordana S.; Petrovic, Slobodan D.
From Hemijska Industrija (2011), 65(5), 551-562. | Language: Serbian, Database: CAPLUS
A review. Oxaprozin (3-(4,5-diphenyloxazol-2-yl)propanoic acid) is a nonsteroidal anti-inflammatory drug (N
bursitis. It is the first representative member of the diaryl-substituted heterocyclic compds., which have

sl.11

https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf

SciFinder - Reference Answ...

File Edit View Favorites Tools Help

SciFinder

Explore Saved Searches SciPlanner

Author Name "Valentic, n" > references (20)

REFERENCES

Get Substances Get Reactions Get Related Citations Get Full Text Tools

Analyze Refine Categorize Sort by: Accession Number

0 of 20 References Selected

Refine by:

- Research Topic
- Author
- Company Name
- Document Type
- Publication Year
- Language
- Database

Research Topic

Examples:

The effect of antibiotic residues on dairy products

Photocyanation of aromatic compounds

Refine

Categorize

1. Select a heading and category. 2. Select index terms of interest.

Category Heading	Category	Index Terms
All	Substances (226)	
General chemistry	Topics (52)	
Physical chemistry		
Technology		
Synthetic chemistry		
Analytical chemistry		
Polymer chemistry		
Catalysis		
Biology		
Biotechnology		
Environmental chemistry		
All		

sl.12

Link do originalnog dokumenta

Uz svaki apstrakt (sažetak) postoji link do originalnog dokumenta. Odabranim člancima je moguće pristupiti u punom tekstu, ukoliko je pretplata omogućena preko KoBSON-a.

Časopisi iz Srbije koji se referišu u Scifinder

Baza SciFinder referiše radove iz više časopisa koji izlaze ili su izlazili u Srbiji. Do sada je referisano više od 9.700 radova. Najviše iz Journal of the Serbian Chemical Society – 3443, a sa radovima iz istog časopisa dok je izlazio pod ranijim nazivima skoro pet hiljada. Najstariji rad koji je referisan publikovan je u Glasniku hemijskog društva Kraljevine Jugoslavije 1930. godine.

U sledećoj tabeli prikazaćemo časopise iz kojih su radovi referisani, s brojem referisanih radova, kao i prvu i poslednju godinu referisanih radova:

Naziv časopisa ISSN	Br. radova referisanih u SF	God. prvog referisanog rada	God. poslednjeg referisanog rada
Chemical Industry and Chemical Engineering Quarterly / CICEQ ISSN 1451-9372	363	2005	2013
Communications in Mathematical and in Computer Chemistry / MATCH ISSN 0340-6253	1.240	1975	2013
Facta universitatis - series: Physics, Chemistry and Technology ISSN 0354-4656	35	2007	2011
Facta universitatis - series: Working and Living Enviromental Protection ISSN 0354-804X	24	2006	2009
Hemijska industrija ISSN 0367-598X	2.204	1966	2012
Hemijski pregled ISSN 0440-6826	432	1971	2004

Journal of Medical Biochemistry ISSN 1452-8258	212	2007	2013
Jugoslovenska medicinska biohemija ISSN 0354-3447	220	1996	2006
Journal of the Serbian Chemical Society ISSN 0352-5139	3.443	1985	2013
Glasnik hemijskog društva ISSN 0017-0941	1.538	1947	1985
Glasnik hemijskog društva Kraljevine Jugoslavije ISSN 0367-4428	3	1930	1939

Literatura:

1. Ratko Jankov: Vodič kroz organsko hemijsku literaturu. – Beograd : ICS, 1975
2. Jankov, Ratko M., Drakulić, Branko J.: Pedesetomilioniti mali molekul registrovan u Chemical Abstract-u, ili kako se pretraživala hemijska literatura nekada i sada, Hemijski pregled, 2010, 51(1), 3-7
3. <https://scifinder.cas.org/>
4. Katalog strane periodike u bibliotekama TMF, SHD, IHTM, PMF-hem.inst. / podatke prikupila, obradila i pripremila Dragana Gojšina. – Beograd : TMF, 1978
5. Nikola Janevski, privatna komunikacija