

♦ Al Overview Learn more :

Chemical logic science is a field of study that uses chemical logic to understand biochemistry and create systems that can perform programmable functions.

Chemical logic

- A framework for understanding biochemistry that organizes topics based on chemical logic principles
- A way to process information from multiple external stimuli to perform programmable functions

Chemical logic systems (CLSs)

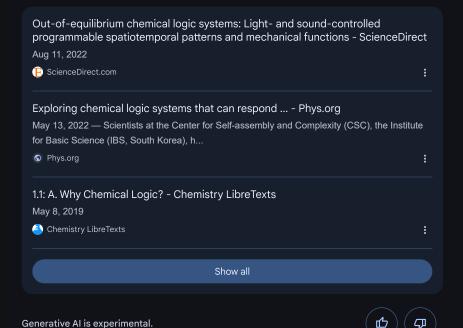
- Systems that can sense external stimuli like light, sound, and oxygen 🕝
- Systems that process information using Boolean logic to perform functions like pattern formation, cargo transport, and maze solving

Chemical logic gates

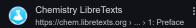
- Systems that can perform simple computations using DNA, RNA, and protein networks
- Systems that can change their shape and physical properties in response to their environment

Research in chemical logic science

- Researchers are developing chemical logic gates that can influence macroscopic properties like crystal structures and electrical properties
- Researchers are designing programmable protein circuits using two-input gates built from de novo-designed proteins



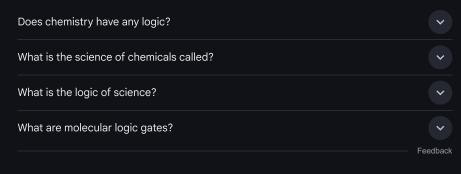
https://www.google.com/search?g=chemical+logic+science&rlz=1C1VDKB_enCA1117CA1117&og=chemical+logic+science&gs_lcrp=EgZiaH.lybWLV



1.1: A. Why Chemical Logic?

May 8, 2019 — It presents biochemistry in the framework of a higher order organizing principle, based in **chemical logic** and understanding, from which topics and order of ...

People also ask :





ScienceDirect.com

https://www.sciencedirect.com > science > article > pii

Out-of-equilibrium chemical logic systems: Light- and ...

by S Choi \cdot 2022 \cdot Cited by 9 — We show that the information processing in out-of-equilibrium **chemical** systems utilizing binary Boolean **logic** can be exploited to obtain transient functions.



Phys.org

https://phys.org > Chemistry > Biochemistry

Exploring chemical logic systems that can respond to ...

May 13, 2022 — The ability to process information obtained from their immediate environment helps organisms perform difficult tasks.



Wikipedia

https://en.wikipedia.org > wiki > Molecular_logic_gate

Molecular logic gate

A molecular logic gate is a molecule that **performs a logical operation based on at least one physical or chemical inputs and a** single output.



ScienceDirect.com

https://www.sciencedirect.com > science > article > pii

Out-of-equilibrium chemical logic systems

by S Choi \cdot 2022 \cdot Cited by 1 — **Chemical or biochemical machineries follow binary logic** and other complex computational algorithms to perform much more complicated ...



Wiley Online Library

https://onlinelibrary.wiley.com > full > advs.202305695

Chemical Logic Gates on Active Colloids - Chen - 2024

by JX Chen \cdot 2024 \cdot Cited by 19 — **Small** chemical networks that make use of enzymatic reactions on the colloid surface—are proposed to construct motor-based chemical logic ...



Quora

https://www.quora.com > ls-chemistry-logical

Is chemistry logical?

Chemistry is logical but it more based on imagination(a magic). Because chemistry is study of atoms and molecules. The atom is a interesting ...

12 answers · Top answer: What you might find illogical is probably perfectly logical to a lot of people (ju...

If the logical order of science courses is physics, chemistry ... are biology and chemistry also forms of logic? - Quora Nov 8, 2015

Is chemistry more logic or memorizing? - Quora Jul 20, 2018

Of what relevance is logic and philosophy relevant to pure and ... Nov 19, 2023

More results from www.quora.com



https://phys.org > visualstories > 2022-05-exploring-che..

Exploring chemical logic systems that can respond to ...

Exploring chemical logic systems that can respond to environmental conditions ... The ability to process information obtained from their immediate environment ...



National Institutes of Health (NIH) (.gov)

https://pubmed.ncbi.nlm.nih.gov > ..

Chemical Logic Gates on Active Colloids

by JX Chen \cdot 2024 \cdot Cited by 19 — It is shown how small chemical networks that make use of enzymatic chemical reactions on the colloid surface can be used to construct motor-based chemical...



Nature

https://www.nature.com > ... > articles

Shrinkable muscular crystal with chemical logic gates ...

by J Manabe \cdot 2024 \cdot Cited by 2 — A \log gate processes multiple physical or chemical inputs and produces outputs based on a series of logical operators. Because muscle cells ...



Results are not personalized

Canada● Toronto, Ontario - From your IP address - Update location