

INSTITUT

GÉOPOLYMÈRE

Prof. Dr. Joseph Davidovits

www.geopolymer.org



Geopolymer in Wikipedia

Part 2

Environ 172 000 résultats (0,20 secondes)

[Géopolymère - Wikipédia](#)

fr.wikipedia.org/wiki/Géopolymère ▾

Les matières premières utilisées sont principalement des minéraux d'origine géologique, d'où le nom « **géopolymère** ». Joseph Davidovits a inventé le terme en ...

[Définition scientifique](#) - [Structure chimique et applications](#) - [Notes et références](#)

[Geopolymer - Wikipedia, the free encyclopedia](#)

en.wikipedia.org/wiki/Geopolymer ▾ [Traduire cette page](#)

Geopolymers are new materials for fire- and heat-resistant coatings and adhesives, medicinal applications, high-temperature ceramics, new binders for ...

[Institut Géopolymère - Geopolymer Institute](#)

www.geopolymer.org/fr/ ▾

SÉMINAIRE GRATUIT sur Internet. Rejoignez le Professeur Joseph Davidovits et suivez le Webinaire **Géopolymère** 2013, un séminaire gratuit sur le Web se ...

[Geopolymer Institute](#)

www.geopolymer.org/ ▾ [Traduire cette page](#)

Coordinates the fundamental research in mineral polymer chemistry, and promotes applied research made with industrial companies.

Geopolymer is a term covering a class of synthetic [aluminosilicate](#) materials with potential use in a number of areas, essentially as a replacement for [Portland cement](#) and for advanced high-tech composites, ceramic applications or as a form of [cast stone](#).

The name Geopolymer was first applied to these materials by [Joseph Davidovits](#)^[1] in the 1970s, although similar materials had been developed in the former [Soviet Union](#) since the 1950s, originally under the name "soil cements".^[2] ^[3] However, this name never found widespread usage in the English language, as it is more often [applied](#) to the description of soils which are consolidated with a small amount of [Portland cement](#) to enhance strength and stability.

Geopolymers are an example of the broader class of [alkali](#)-activated binders, which also includes alkali-activated [metallurgical slags](#) and other related materials.^[4]

Talk:Geopolymer

From Wikipedia, the free encyclopedia



This article is within the scope of **WikiProject Engineering**, a collaborative effort to improve the coverage of **engineering** on Wikipedia. If you would like to participate, please visit the project page, where you can join the **discussion** and see a list of open tasks.



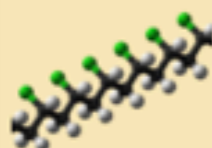
[Engineering portal](#)

???

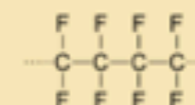
This article has not yet received a rating on the project's [quality scale](#).

???

This article has not yet received a rating on the project's [importance scale](#).



Geopolymer is within the scope of **WikiProject Polymers** which aims to improve the coverage of **polymer**-related articles in Wikipedia. If you are interested, you may visit the [project page](#) and join with us. Feel free to leave messages at the [project talk page](#).



This page refers to geopolymers as being Al-Si based, yet [Davidovits](#) refers to a form of limestone concrete based geopolymers used in the construction of the Egyptian pyramids. Surely the definition needs broadening. [Jerrydsj \(talk\)](#) 09:39, 26 September 2009 (UTC)

I disagree - Davidovits also claims clay minerals, diamond, silicone rubber and a variety of other materials as being "geopolymers" in his recent book - but this definition is not commonly used in the broader research community. The work of Michel Barsoum at Drexel University on the limestone/pyramids side of things has shown little or no geopolymer-like (alkali aluminosilicate gel) character in the pyramid stones. [Johnprovis \(talk\)](#) 04:36, 26 April 2010 (UTC)

The "broader research community" mentioned by user Johnprovis is limited to alkali-cement people. They try to explain geopolymer structures and chemistry with their Portland cement chemistry background, which is wrong because they only focus on a limited field of applications. Actually, they represent only 1/3 of the "research community". This was exemplified at a recent workshop on geopolymerization held in the UK (dec. 2012). There were three groups: one on geopolymer resins and binders, one on geopolymer composites and one on geopolymer cement. Contrary to Johnprovis statement by which in my book "Geopolymer cChemistry and Applications" I claim "diamond "being a geopolymer, this is pure allegation . As for "silicone rubber", everybody may check that silicones belong to the category of "inorganic polymers", like geopolymers, by simply clicking on the category at the bottom of the main article. In my book it is found in Chapter 14 titled "Organo-mineral geopolymer". We are faced here with the famous dilemma by which one tries to define a glass that contains only 50% liquid: for pessimistic it is "half-empty", for optimistic it is "half-full". I belong to the optimistic category, to those who claim that organo-mineral polymers are inorganic polymers, i.e. orgno-mineral geopolymers. As for the analysis by Michel Barsoum and al. (see the reference nr.46 in the main article) , Johnprovis forgot to mention that the team analyzed two types of stone: casing stone and core stone. The casing stones contain very high amount of silica-based geopolymer and other Silico-Mg-compounds, whereas the make up of the core stone is different, comprising an alumino-magnesio-silicate, i.e an hydrid geopolymer. Johnprovis mentioned my recent book "Geopolymer Chemistry and Applications" but forgot to precise that these analysis and the chemistry mechanism are well described in Section 17.3. This is also available at <http://www.geopolymer.org/archaeology/pyramids/pyramids-3-the-formula-the-invention-of-stone>

[Prof. Joseph Davidovits \(talk\)](#) 13:51, 25 January 2013 (UTC)

Factual accuracy disputed [edit]

See [User talk:Vanischenu](#) 🔒 (for future reference), the scientist, Sir Davidovits, himself has questioned the article content's accuracy. [Here](#) 🔗 is the video on the same. Thank you!…[Vanischenu](#) ^m/_{Talk} 16:26, 11 January 2013 (UTC)

I have been mandated by the "Geopolymer scientists community" to write a totally new article on "Geopolymers" that must replace the existing one, which is considered as being inaccurate. See the discussion at the last conference "Geopolymer Camp 2012" , second video at <http://www.geopolymer.org/camp/gp-camp-2012> 🔗 .

Review of [User:JDavidovits/sandbox](#)

[Prof. Joseph Davidovits](#) ([talk](#)) 07:22, 18 January 2013 (UTC)

Davidovits and his institute should be listed as a small aside in the article and removed from central focus as Davidovits is obviously a quack.[184.45.20.31](#) ([talk](#)) 11:52, 4 January 2013 (UTC)

swindler, charlatan

[removed insulting comments by [184.45.20.31](#) dated 11:52, 4 January 2013 (UTC)]

…[Vanischenu](#) ^m/_{Talk} 15:51, 20 January 2013 (UTC)

This page refers to geopolymers as being Al-Si based, yet [Davidovits](#) refers to a form of limestone concrete based geopolymers used in the construction of the Egyptian pyramids. Surely the definition needs broadening. [Jerrydsj](#) ([talk](#)) 09:39, 26 September 2009

I disagree - Davidovits also claims clay minerals, diamond, silicone rubber and a variety of other materials as being "geopolymers" in his recent book - but this definition is not commonly used in the broader research community. The work of Michel Barsoum at Drexel University on the limestone/pyramids side of things has shown little or no geopolymer-like (alkali aluminosilicate gel) character in the pyramid stones. [Johnprovis](#) ([talk](#)) 04:36, 26 April 2010 (UTC).

JD's answer 25 January 2013:

The "broader research community" mentioned by user Johnprovis is limited to alkali-cement people. They try to explain geopolymer structures and chemistry with their Portland cement chemistry background, which is wrong because they only focus on a limited field of applications. Actually, they represent only 1/3 of the "research community".

This was exemplified at a recent workshop on geopolymerization held in the UK (dec. 2012). There were three groups: one on geopolymer resins and binders, one on geopolymer composites and one on geopolymer cement. [Prof. Joseph Davidovits](#) ([talk](#))
13:51, 25 January 2013 (UTC)

Regarding Johnprovis statement by which in my book "*Geopolymer Chemistry and Applications*" I claim "diamond" being a geopolymer, this is pure allegation. As for "silicone rubber", everybody may check that silicones belong to the category of "*inorganic polymers*", like geopolymers, by simply clicking on the category at the bottom of the main article. In my book it is found in Chapter 14 titled "Organo-mineral geopolymer". We are faced here with the famous dilemma by which one tries to define a glass that contains only 50% liquid: for pessimistic it is "half-empty", for optimistic it is "half-full". I belong to the optimistic category, to those who claim that organo-mineral polymers are inorganic polymers, i.e. organo-mineral geopolymers. As for the analysis by Michel Barsoum and al. (see the reference nr.46 in the main article), Johnprovis forgot to mention that the team analyzed two types of stone: casing stone and core stone. The casing stones contain very high amount of silica-based geopolymer and other Silico-Mg-compounds, whereas the make up of the core stone is different, comprising an alumino-magnesium-silicate, i.e. an hybrid geopolymer. Johnprovis mentioned my recent book "*Geopolymer Chemistry and Applications*" but forgot to precise that these analysis and the chemistry mechanism are well described in Section 17.3. This is also available at <http://www.geopolymer.org/archaeology/pyramids/pyramids-3-the-formula-the-invention-of-stone> [Prof. Joseph Davidovits](#) ([talk](#)) 13:51, 25 January 2013

(UTC



WIKIPEDIA
The Free Encyclopedia

[Main page](#)
[Contents](#)
[Featured content](#)
[Current events](#)
[Random article](#)
[Donate to Wikipedia](#)

▼ [Interaction](#)

[Help](#)
[About Wikipedia](#)
[Community portal](#)
[Recent changes](#)
[Contact Wikipedia](#)

► [Toolbox](#)

► [Print/export](#)

▼ [Languages](#)

[Català](#)
[Česky](#)
[Eesti](#)
[Español](#)

[Create account](#)  [Log in](#)

Article

[Talk](#)

Read

[Edit](#)

[View history](#)



Geopolymer

From Wikipedia, the free encyclopedia

Geopolymers are new materials for fire- and heat-resistant coatings and adhesives, medicinal applications, high-temperature ceramics, new binders for fire-resistant fiber composites, toxic and radioactive waste encapsulation and new cements for concrete. The properties and uses of geopolymers are being explored in many scientific and industrial disciplines: modern inorganic chemistry, physical chemistry, [colloid chemistry](#), mineralogy, geology, and in other types of engineering process technologies. Geopolymers are part of polymer science, chemistry and technology that forms one of the major areas of materials science. Polymers are either organic material, i.e. carbon-based, or [inorganic polymer](#), for example silicon-based. The [organic polymers](#) comprise the classes of natural polymers (rubber, cellulose), synthetic organic polymers (textile fibers, plastics, films, elastomers, etc.) and natural biopolymers (biology, medicine, pharmacy). Raw materials used in the synthesis of silicon-based polymers are mainly rock-forming minerals of geological origin, hence the name: *geopolymer*. [Joseph Davidovits](#) coined the term in 1978^[1] and created the non profit French scientific institution (Association Loi 1901) *Institut Géopolymère* (Geopolymer Institute).

According to T.F. Yen^[2] geopolymers can be classified into two major groups: pure inorganic geopolymers and organic containing geopolymers, synthetic analogues of naturally occurring [macromolecules](#). In the following presentation, a geopolymer is essentially a mineral chemical compound or mixture of compounds consisting of repeating units, for example silico-oxide (-Si-O-Si-O-), silico-aluminate (-Si-O-Al-O-), ferro-silico-aluminate (-Fe-O-Si-O-Al-O-) or alumino-phosphate (-Al-O-P-O-), created through a process of geopolymerization.^[3] This mineral synthesis (geosynthesis) was first presented at an [IUPAC](#) symposium in 1976.^[4] However, very often, scientists are taking the 1991 publication as starting reference.^[5]

Geopolymers are new materials for fire- and heat-resistant coatings and adhesives, medicinal applications, high-temperature ceramics, new binders for fire-resistant fiber composites, toxic and radioactive waste encapsulation and new cements for concrete.

The properties and uses of geopolymers are being explored in many scientific and industrial disciplines: modern inorganic chemistry, physical chemistry, colloid chemistry, mineralogy, geology, and in other types of engineering process technologies.

Geopolymers are part of polymer science, chemistry and technology that forms one of the major areas of materials science. Polymers are either organic material, i.e. carbon-based, or inorganic polymer, for example silicon-based.

The organic polymers comprise the classes of natural polymers (rubber, cellulose), synthetic organic polymers (textile fibers, plastics, films, elastomers, etc.) and natural biopolymers (biology, medicine, pharmacy).

Raw materials used in the synthesis of silicon-based polymers are mainly rock-forming minerals of geological origin, hence the name: *geopolymer*.

Joseph Davidovits coined the term in 1978[1] and created the non profit French scientific institution (Association Loi 1901) *Institut Géopolymère* (Geopolymer Institute).

According to T.F.Yen[2] geopolymers can be classified into two major groups:

- pure inorganic geopolymers and

- organic containing geopolymers, synthetic analogues of naturally occurring macromolecules.

In the following presentation, a geopolymer is essentially a mineral chemical compound or mixture of compounds consisting of repeating units, for example silico-oxide (-Si-O-Si-O-), silico-aluminate (-Si-O-Al-O-), ferro- silico-aluminate (-Fe-O-Si-O-Al-O-) or alumino-phosphate (-Al-O-P-O-), created through a process of geopolymerization.[3]

This mineral synthesis (geosynthesis) was first presented at an IUPAC symposium in 1976.[4] However, very often, scientists are taking the 1991 publication as starting reference.[5]

pdf Geopolymer Wikipedia



Article [Talk](#)

Read

[Edit](#)

[View history](#)

Search



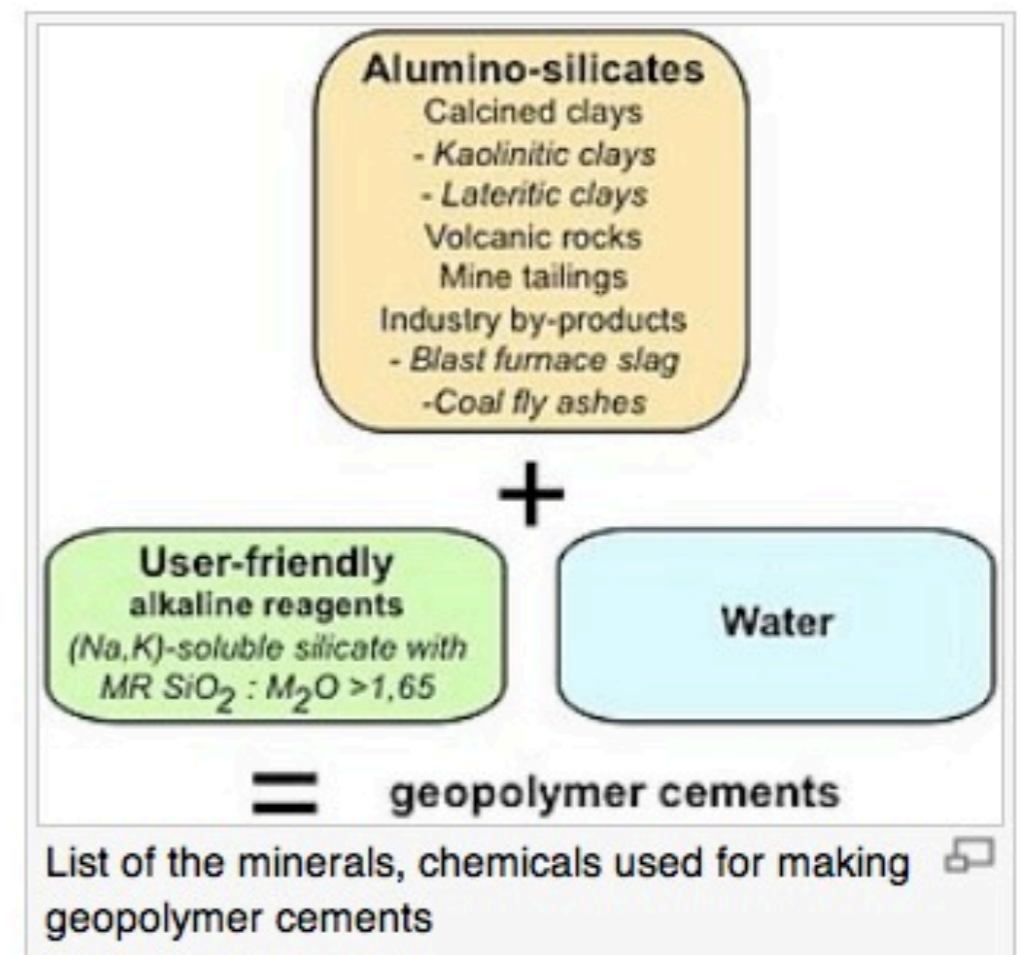
Geopolymer cement

From Wikipedia, the free encyclopedia

This article is a development of the main article [Geopolymer](#). From a terminological point of view, **geopolymer cement**^[1] is a binding system that hardens at room temperature, like regular [Portland cement](#). If a geopolymer compound requires heat setting it may not be called geopolymer [cement](#) but rather geopolymer binder.

Geopolymer cement is an innovative material and a real alternative to conventional Portland cement for use in transportation infrastructure, construction and offshore applications. It relies on minimally processed natural materials or industrial byproducts to significantly reduce its [carbon footprint](#), while also being very resistant to many of the durability issues that can plague conventional concretes.

Creating geopolymer cement requires an alumina silicate material, a user-friendly alkaline reagent^[2] (sodium or potassium soluble silicates with a molar ratio $MR \text{ SiO}_2 : \text{M}_2\text{O} > 1,65$, M being Na or K) and water (See the definition for "user-friendly" reagent below). Room temperature hardening relies on the addition of calcium cations, essentially iron blast furnace slag.



- [Main page](#)
- [Contents](#)
- [Featured content](#)
- [Current events](#)
- [Random article](#)
- [Donate to Wikipedia](#)

- [Interaction](#)
 - [Help](#)
 - [About Wikipedia](#)
 - [Community portal](#)
 - [Recent changes](#)
 - [Contact Wikipedia](#)

- [Toolbox](#)
- [Print/export](#)

- [Languages](#)
 - [Français](#)

[Edit links](#)

pdf Geopolymer Cement Wikipedia



WIKIPEDIA
The Free Encyclopedia

[Main page](#)

[Contents](#)

[Featured content](#)

[Current events](#)

[Random article](#)

[Donate to Wikipedia](#)

▼ [Interaction](#)

[Help](#)

[About Wikipedia](#)

[Community portal](#)

[Recent changes](#)

[Contact Wikipedia](#)

► [Toolbox](#)

[Create account](#)  [Log in](#)

[Article](#)

[Talk](#)

[Read](#)

[Edit](#)



Search



Talk:Geopolymer cement

From Wikipedia, the free encyclopedia

Article Clearly Written as An Advertisement

[\[edit\]](#)

This article, along with the one on [geopolymers](#) in general, is clearly written as an advertisement. I have a hunch that it was written by the Geopolymer Institute, as said institute is repeatedly mentioned in the article. I am not sure what to do, as I really do not know much about geopolymers, so I await a fellow Wikipedian who is better than me in this area of knowledge to help fix it.

[自教育](#) (talk) 23:04, 24 February 2013 (UTC)

This page was last modified on 24 February 2013 at 23:04.

Text is available under the [Creative Commons Attribution-ShareAlike License](#);

[User page](#)[Talk](#)[Read](#)[Edit](#)[View history](#)

I am an undergraduate anthropology student in the state of California in the USA, but I have a good amount of self-education in history, theoretical politics, economics, husbandry and abstract art.

management and conservation of agricultural resources.

I think I would be most helpful in furthering Wikipedia in the following areas:

- Andean studies, strong interest about Andean Civilizations.....
- Linguistics, especially semantics, writing systems.....
- Various underutilized crops and neglected agricultural areas, such as New Guinea or West Africa.....
- Things related to the Sumerian Language,.....
- Ornamental fish species. I am aquarist,

Geopolymer in

Wikipedia

Part 2

