

# Fire: Properties and Significance for Nature, Culture and Humanity

**Report**

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# **Fire: Properties and Significance for Nature, Culture and Humanity**

Peter Brüesch

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## 2. Preface

With regards to the four **Greek Elements** «Water», «Air», «Fire» and «Earth» I have published the greek element «Water» in April 2012 and the element «Atmosphere» or «Air» in January 2016. The two E-Books have been published at the Library «ETH E-Collection» of the «Swiss Federal Institute of Technology» of Zurich, Switzerland. The titles of these two books are

**«WATER:  
Its significance in Science, in Nature and Culture,  
In World Religions and in the Universe»**

and

**«The Atmospheres of our Earth, of the Planets of our  
Solar System and of Exoplanets»**

The present third book is dedicated to the element «Fire» with the title

**«Fire: Properties and Significance for Nature, Culture and Humanity» .**

It is of great importance to embed the «Four Greek Elements» into the context of our modern time. In doing so it comes as a big surprise of how many of the modern perceptions can be covered. The same applies, of course, also for the fourth greek element «Earth» . I do hope that my time allows me to incorporate also this latter element.

Peter Brüesch

December 2017

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## 3. Quotations about «Fire»

**«Heat cannot be separated from fire, or beauty from The Eternal»**

(Dante Alighieri)

**«Talent is a flame, Genius is a fire»**

(Bernard Williams)

**«A home is not a home until it contains food and fire  
for the mind as well as the body»**

(Benjamin Franklin)

**«There may be a great fire in our soul, yet no one ever  
comes to warm himself at it,  
and the passers-by see only a wisp of smoke»**

(Vincent van Gogh)

**«Just as a candle cannot burn without fire,  
men cannot live without a spiritual life»**

(The Buddha)

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#### 4. Peter Brüesch : Scientific Career

- 1934 Born in Schuls (Scuol) – Graubünden – Switzerland
- 1948 – 1954 Academic high school in Chur, Switzerland
- 1954– 1960 Study of Experimental Physics at the ETHZ in Zürich
- 1960 – 1965 PhD at the Laboratory of „Physical Chemistry“ at the ETHZ
- 1965 – 1967 Postdoctoral Fellowship at the Chemistry Department , Oregon State University, USA
- 1967 – 2002 Scientific collaborator and Project Leader at the ABB Research Center – Switzerland  
Studies of „Solid State Physics“ , resulting in 72 publications in refereed Journals
- 1975 Nominated «Assistant Lecturer» at the Physics Department of the EPFL in Lausanne  
Lectures about «Phonons: Theory and Experiments»
- 1987 Nominated „Professeur Titulaire“ at the Physics Department of the EPFL  
Lectures about «Phonons» and «The Physics of Water and Aqueous Solutions»
- 1982 – 1986 Author of a 3- Volume Book about the «Physics of Phonons» -Springer Series in Solid State Physics
- 1998 – 2000 Consultant at the ABB Research Center in the field of «Water Technology and Aqueous Solutions»
- 2000 – 2011 Studies and Research on „Water and Aqueous Solutions and its role in Nature“
- Since 1997: Lectures about „Solid State Physics“ and about „Water“ at the EPFL in Lausanne
  - 2002 – 2001: Elaboration of a comprehensive work about „Water“ :  
This formed the basis of the following extended Work in German and English:
- „Wasser : Seine Bedeutung in der Wissenschaft, in der Natur und Kultur,  
in den Weltreligionen und im Universum“
- „Water : Its Significance in Science, in Nature and Culture,  
in World Religions and in the Universe“
- 2011 - 2016: «The Atmosphere of our Earth, of the Planets of our Solar System and of Exoplanets»
- 2017 – 2018: «Fire : Properties and Significance for Nature, Culture and Humanity»
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