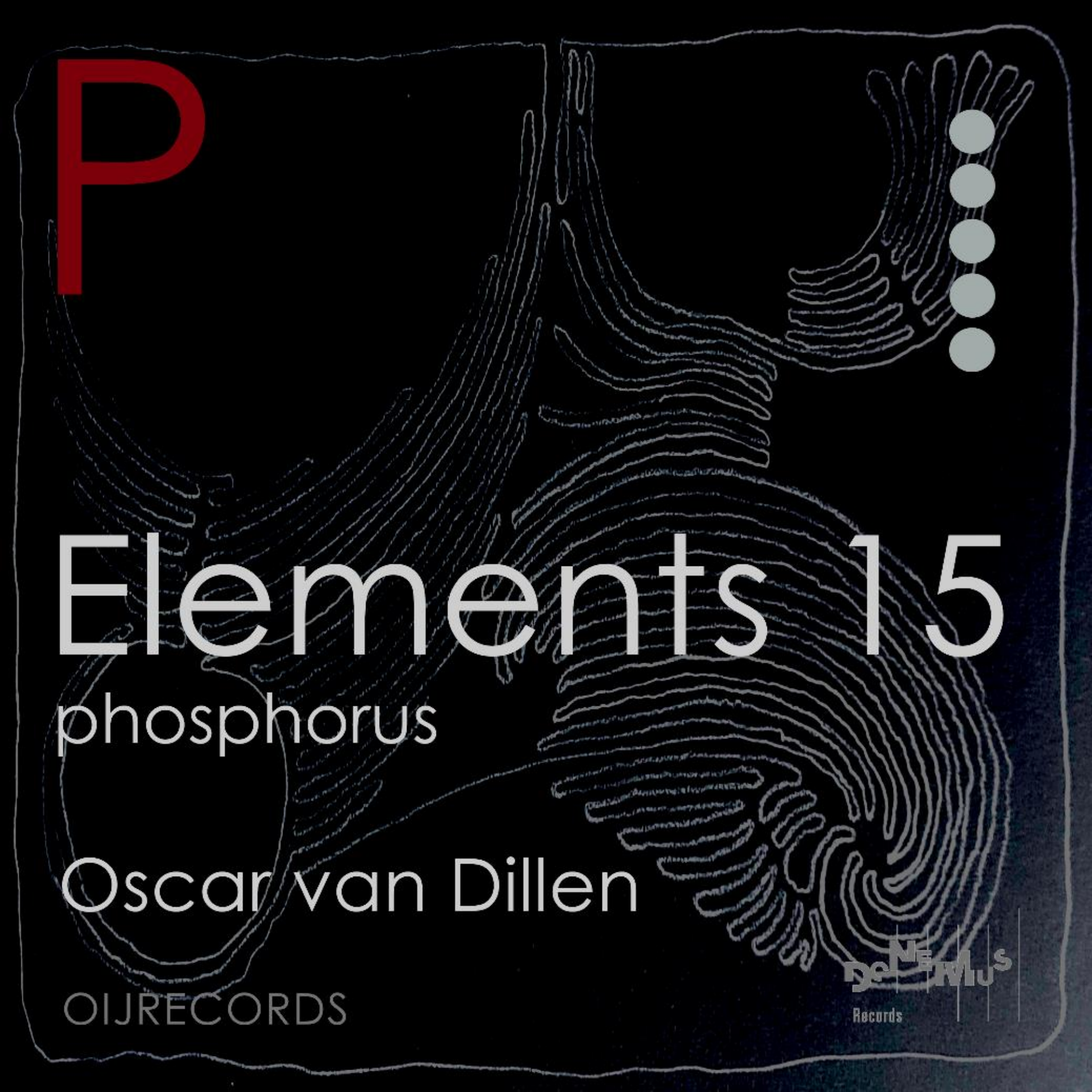

P
Elements 15
phosphorus
Oscar van Dillen
OIJRECORDS
Records

Elements 15: P

Elements 15: Phosphorus is the seventh album in a series of music on the Elements, a large work in progress consisting of electronically/digitally created architectural music compositions by Oscar van Dillen.

The work on this album was composed December 2022.

All works, cover art and booklet of this album were created by Oscar van Dillen.

The other albums in this series so far, in order of release:

- Elements 1: Hydrogen Deuterium Tritium H D T
- Elements 118: Oganesson Og
- Elements 6: Carbon C
- Elements 8: Oxygen – Ozone O
- Elements 14: Silicon Si
- Elements 7: Azote N
- Elements 2: Helium He

Tracks

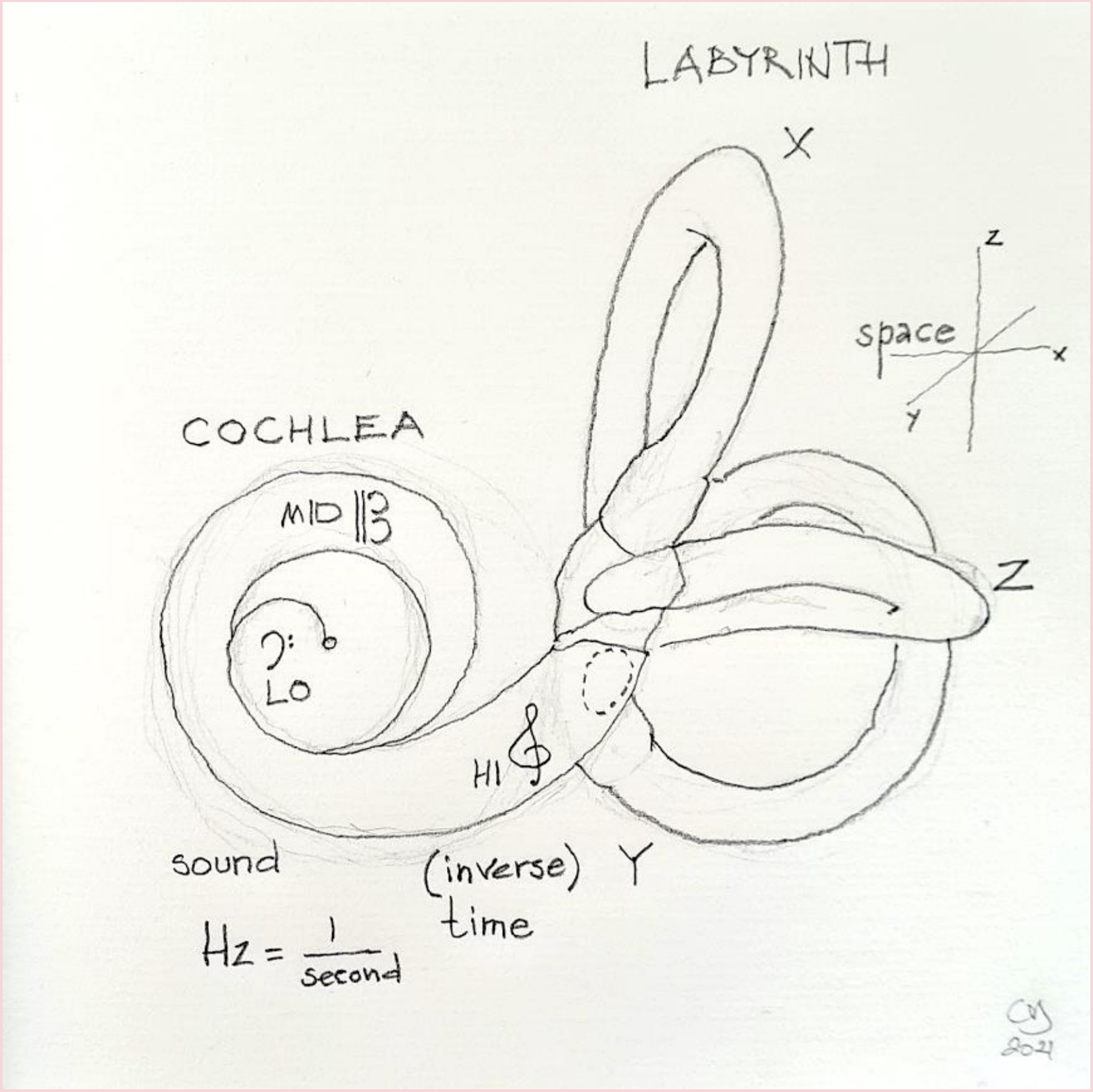
1.	White Phosphorus	17:37
2.	Red Phosphorus	17:37
3.	Black Phosphorus	17:40

Total duration: 52:54

Ways of Listening to the Elements

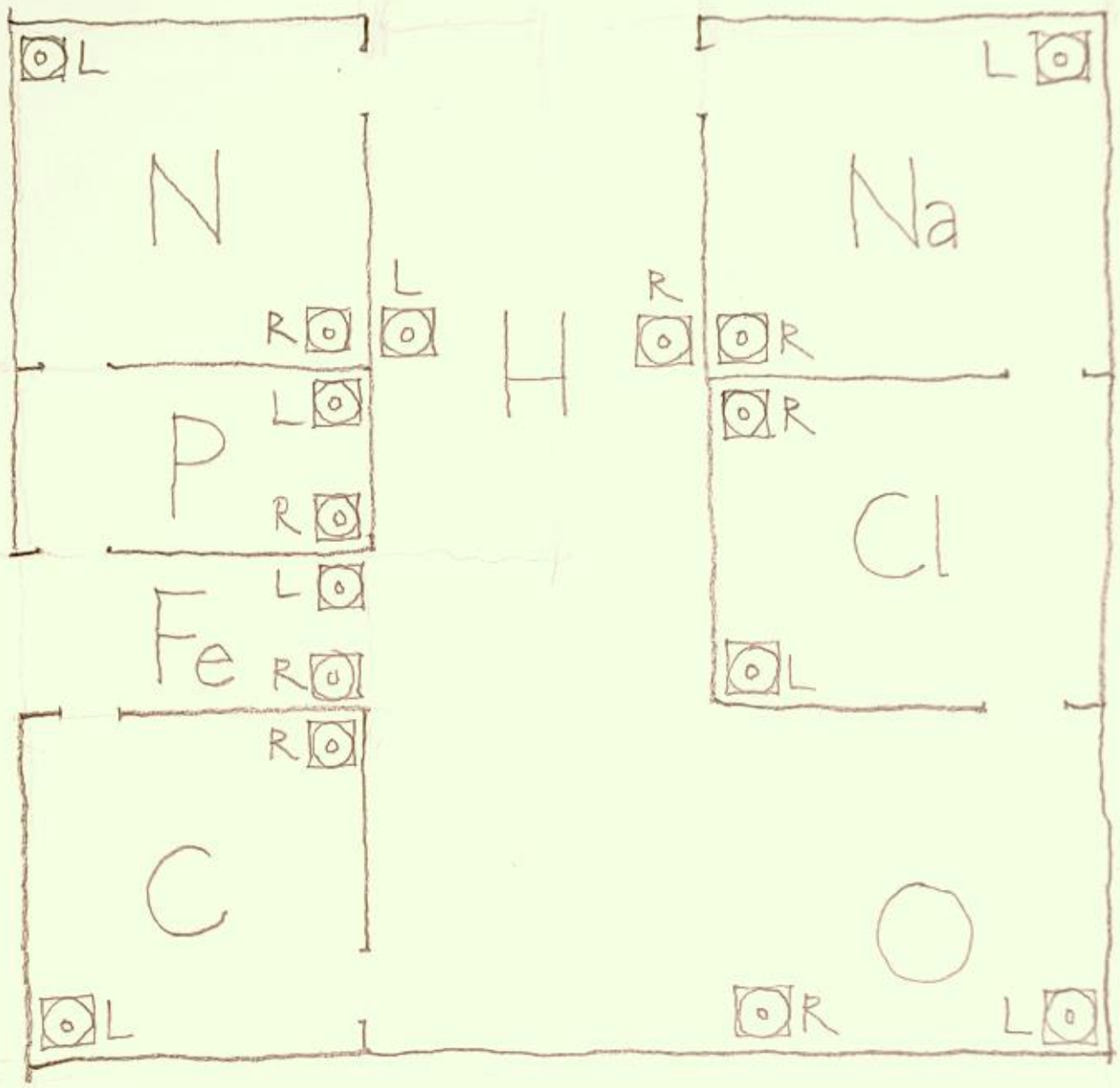
The series *Elements* consist of digital compositions which have a more static, installation-like character, crossing the border between musical and spatial composition, linking up music and architecture, both arts concerning Space. It is a remarkable feature of human anatomy that the inner ear is the organ that perceives sound as well as space. Inside in the *cochlea* resonating crystals distinguish the frequencies within sound. Outside on top of the same organ there are the three half-circles of the *Labyrinth*, perceiving spatial movement along an XYZ axis system. The direct perception of 4-dimensional space-time itself can be seen in this essential part of our anatomy: one organ handling perceptual elements of both space and time in unison.

Space, in the perception of XYZ orientation on the inside of the Labyrinth: spatial movement and balance. Time, or rather the inverse of time in Hz and frequency cycles/s in the perception of pitch on the inside the Cochlea.


LABYRINTH
X
z
space
x
y
COCHLEA
MID
LO
HI
Z
sound
(inverse) Y
time
Hz = 1/second
CJ
2024

Van Dillen's compositions in the series Elements can be listened to in several ways. Traditionally these are: privately over loudspeakers or headphones, or in a concert situation, that somewhat awkward setting where a group of interested people are sitting immobile and listening to what comes out precorded out of a professional loudspeaker system, with no apparent performers in sight. Each of the Elements is created to be able to stand on its own, as a deeply composed and serious work of art, to be enjoyed on its own. Yet the Elements series as a whole has also been conceived to work and sound together as a larger ensemble: a potential meta-symphony of works, to be exhibited and enjoyed in an architectural sound installation of a variety of Elements set to play on repeat.

For installation playback of the series Elements, van Dillen proposes this option of creating simultaneously playing (looping) versions of various Elements widely spaced apart over a large space or several neighbouring spaces. Listeners could actively move around through the music or choose to linger or sit in certain spots for some time.



2021

Also at home, a smaller version of an installation can be realized by playing several (looping) compositions in adjacent rooms, so they somewhat overlap and audibly interact. The only thing needed is one playback device per home installation element.

It is the composer's wish that he himself as well as others will be able to create an ever-evolving range of different choreographies for various architectural installation performances of these works in the future, of diverse sizes and durations, ranging from the very intimate to the truly monumental and in everything between.

If such architectural installations would be placed in a museum, they would allow interaction with visual arts as well, but they could also be put in very dark settings. Meanwhile at home, the listeners are challenged to DIY DJ and mix two or more of these compositions and turn one's home into a personal theatre or museum.
A degree of inclusion of the listener into the process of creation can thus be achieved.

Elements of both Music and Chemistry

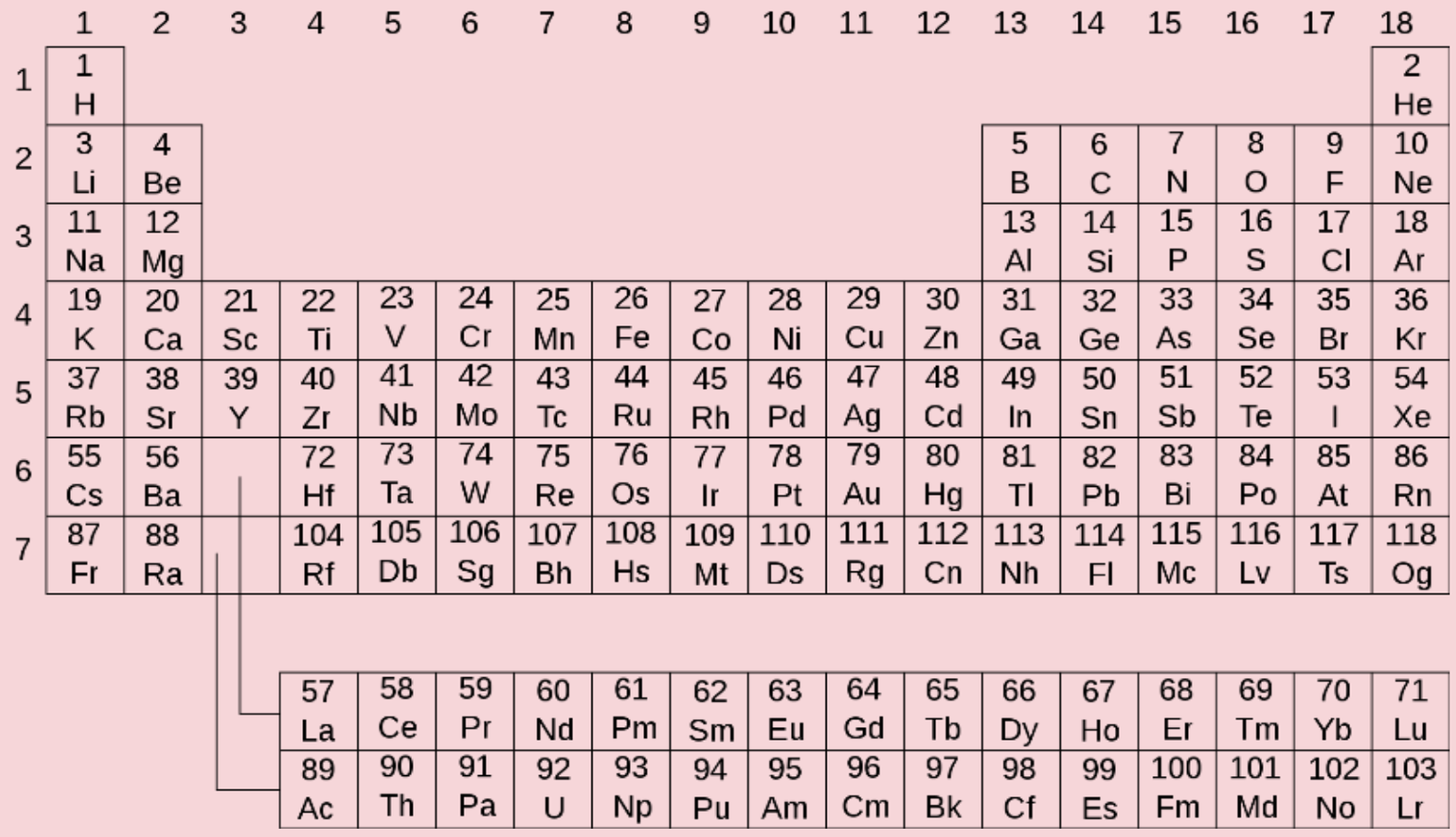
The Elements referred to in the title are obviously the chemical elements: the very first of the periodic table of which is Hydrogen with its remarkable isotopes Deuterium and Tritium, the only isotopes with their own chemical abbreviation. Less obvious from the titles is the use of Elements of Music, as described in his original approach to composing: his *method* (not a system) of *prepositional analysis,* developed from 1998-2011 by van Dillen.

Prepositional analysis is a new approach to the creation and analysis of music, not restricted to any style or vocabulary, but based on how humans hear music and perceive its elements Sound and Silence in interaction. Sound manifests itself in spectrum, time, and space, and from this observation 5 categories are derived, which sum up to 6 with silence included. These both include and transcend Stockhausen's 5 dimensions of sound (pitch, duration, volume, timbre, and place). Based on the interactions a set of 22 prepositional analytical concepts is postulated, for use in creative composition or analysis.

These elements of music have in fact been used for a longer time and some if not all of them can be found in music history. In the work on this album, they are used to create new music inspired by the chemical elements. The chemical elements being such basic building blocks of matter, represent the basis for every existence, and for life. By means of Mendeleev's system for natural matter, and thus for material nature, van Dillen ventured to compose his meta-symphony *Elements*.

In his youth, Van Dillen spend quite a lot of (sometimes dangerous) time in his own small chemical laboratory, being patiently and lovingly inspired, coached, and sometimes warned by his uncle the professional chemist Hugo Wertheim.

This series Elements is an elaboration of this lifelong love for the basic building blocks of matter as it formed in the millions upon millions of years following the Big Bang.


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
1 2
1 H He
2 3 4 5 6 7 8 9 10
Li Be B C N O F Ne
3 11 12 13 14 15 16 17 18
Na Mg Al Si P S Cl Ar
4 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr
5 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54
Rb Sr Y Zr Nb Mo Tc Ru Rh Pd Ag Cd In Sn Sb Te I Xe
6 55 56 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86
Cs Ba Hf Ta W Re Os Ir Pt Au Hg Tl Pb Bi Po At Rn
7 87 88 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118
Fr Ra Rf Db Sg Bh Hs Mt Ds Rg Cn Nh Fl Mc Lv Ts Og
57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb Lu
89 90 91 92 93 94 95 96 97 98 99 100 101 102 103
Ac Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No Lr

Phosphorus

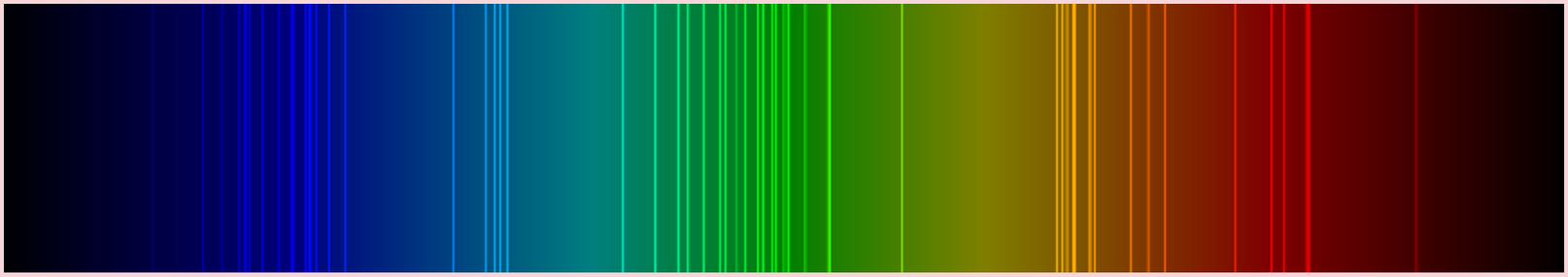
Phosphorus may be best known for its use in the original matches, and therefore for its ability to catch fire. Weapons still exist that make use of this elemental property with terrible destruction as a result. It is, however, also an element vital to life, and an essential part of DNA and many other biological chemical compounds.

In its form of phosphate PO_4^{3-}, phosphorus is a growth limiting factor in geographical areas. Historically the lack of it in the soil would make land infertile for plant growth and would thus determine the size of animal and human populations in places. The global use of fertilizers today now added phosphates all over the planet, and land thus fertilized allows for a larger population growth.

In its molecular from Phosphorus, abbreviated as P, occurs in a number of allotropes, the most common of which are red, white, and black phosphorus. Of these, white is the most reactive and volatile, and the most toxic, and has been used in weapons. Red is a stage between white and

violet phosphorus, still somewhat reactive yet in a process of stabilization. Black phosphorus finally is the most stable and least reactive form, it resembles graphite, a form of carbon, even to the point of its electroconductivity.

Phosphorus is element number 15 and the second of the so called *pnictogens*, which are the elements of group 15. Phosphorus is found just below Nitrogen, and both are classified as "non-metals". This negative classification name indeed is used simply for all elements not fitting into the other categories, which are *metals* (alkali-, alkaline earth-, post transition-, heavy transition-, refractory-, and the noble metals), *metalloids*, *lanthanoids*, *actinoids*, *halogens* and *noble gasses*. Other classifications also speak of rare earth metals, of superheavy elements, and even of ephemeral elements.



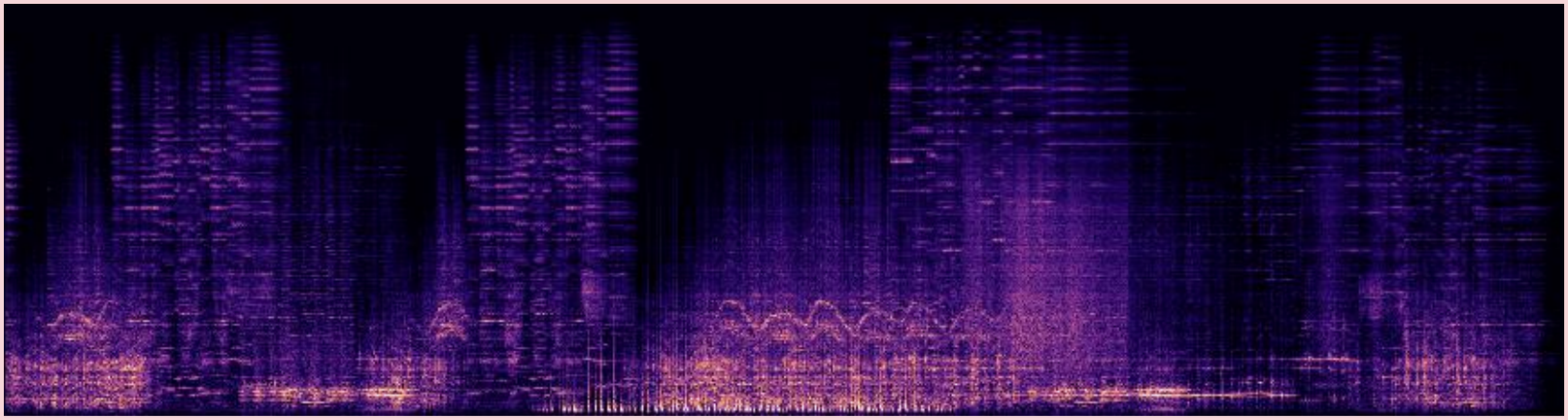
light spectral lines of the element phosphorus

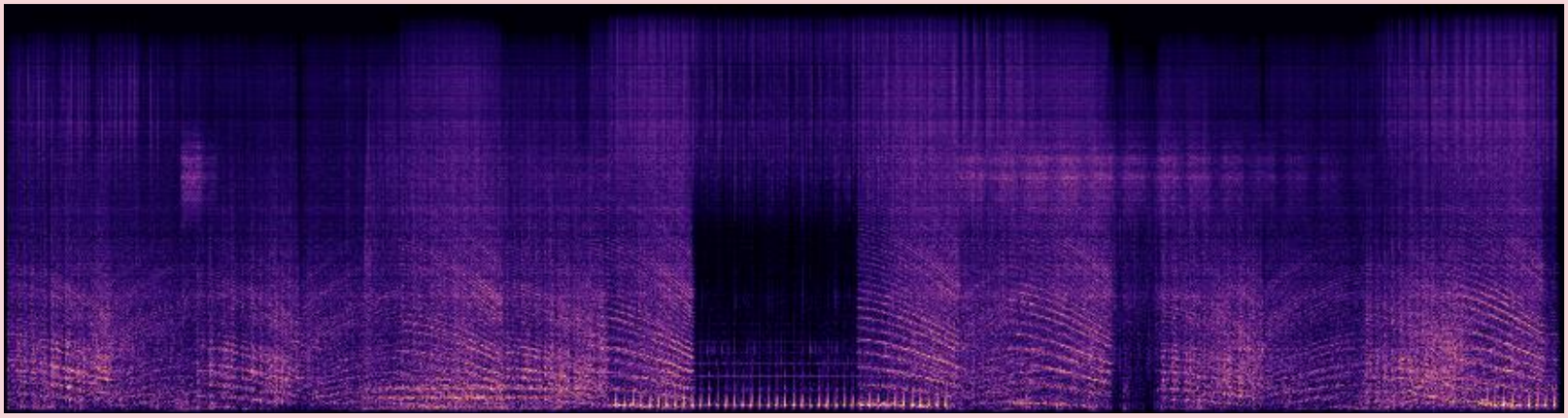
Music of Phosphorus

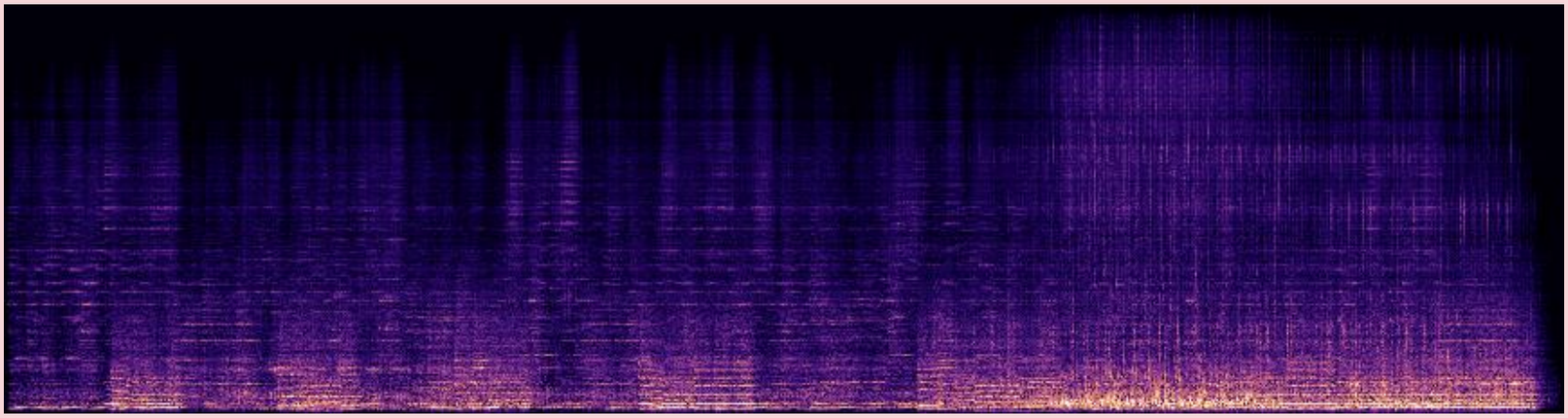
A reflection of and on the volatile basic nature of the element Phosphorus can be found in the sparkling and resonant distorted sounds used overall. In all three parts a variety of rhythmic elements arise and decay. In view of the overall presence of the complete spectrum of sound, this album comes close to being a kind of sculpted noise.

This has been achieved in two ways: by sculpting noise from various sources (white, pink, brown) into resonances, and by sculpting and distorting resonances and sounds into noisiness. Both latest and more traditional electronic modular technologies have been used to achieve this.

Among the inspirations for this album have been works such as *Sisyphus* by Pink Floyd (which was on the very first record the composer ever bought in his life), *Free Form Guitar* by Chicago, and the overall sound explorations of many of the later Jimi Hendrix solos. Van Dillen found works such as these to capture best the basic nature of the character of the element Phosphorus in sound.

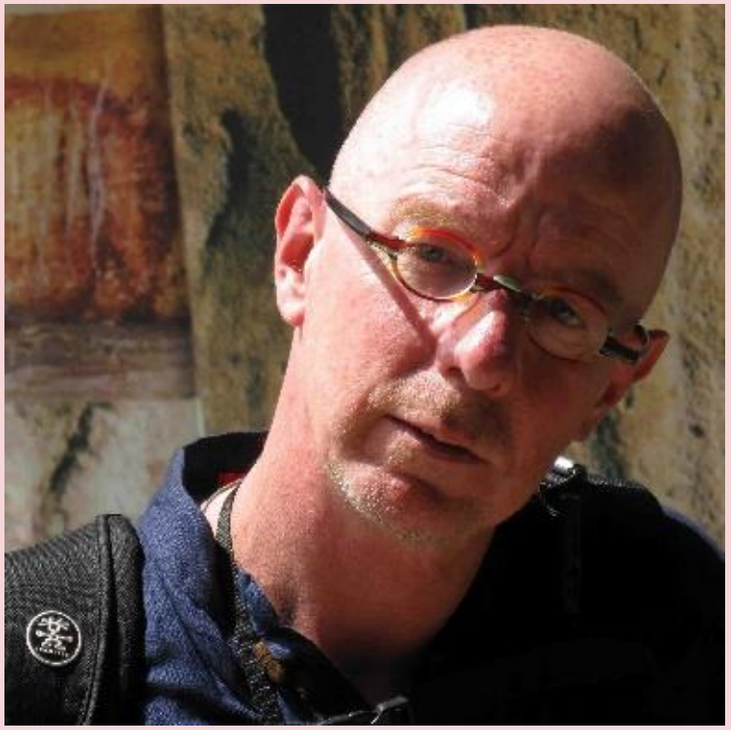






sound spectral graphs of the music of white, red, and black phosphorus

Oscar van Dillen



Oscar Ignatius Joannes van Dillen ('s-Hertogenbosch 1958), is composer and performer of music, professor of music at Codarts University for the Arts in Rotterdam, as well as visual artist. A polyglot and an erudite world citizen, he is also one of the pioneers from the early years of Wikipedia, having been founding president of Wikimedia Nederland and serving as a trustee of the Wikimedia Foundation. Van Dillen has studied a wide variety of musical traditions with many renowned teachers. His music education having started at the age of 7, performing both classical and rock music in his youth, van Dillen first studied North-Indian classical music (sitar, tabla, vocal) with Jamaluddin Bhartiya at the Tritantri School in Amsterdam and bansuri with Gurbachan Singh Sachdev at the Bansuri School of Music in Berkeley, California. Next, he studied classical and jazz flute at the Sweelinck Conservatory in Amsterdam. He took composition lessons from Misha Mengelberg. As a flutist, he was taught by Lens Derogée and Dieks Visser, and followed masterclasses from Pierre-Yves Artaud, Geoffrey Gilbert and Barthold Kuijken.

After his following postgraduate studies of medieval and Renaissance music with Paul Van Nevel in Leuven (Belgium), he studied classical and contemporary composition with, among others, Dick Raaymakers, Diderik Wagenaar and Gilius van Bergeijk at the Koninklijk Conservatory in The Hague, with Klaas de Vries, Peter-Jan Wagemans and René Uijlenhoet at the Rotterdam Conservatory and with Manfred Trojahn at the Robert Schumann College in Düsseldorf, where he also received lessons in conducting from Lutz Herbig. As a composer he furthermore followed masterclasses from, among others, Isang Yun, George Crumb, Jan van Vlijmen, Marek Stachowski, Zbigniew Bojarski and Gerard Brophy.

A founding member of the Rotterdam School of composers and the author of its manifesto, he currently works as professor of music at the Codarts University of the Arts Rotterdam since 1997, teaching composition and arranging, improvisation, world music composition, music history and music theory in the Jazz-, the Pop-, the World music, the Classical music, and the Music Education Academies of Codarts.

Oscar van Dillen is the inventor of *original world music composition*, combining strictly composed- with improvised classical and folk traditions, and their techniques and mentalities for creating music: a new and contemporary form of art music.

Van Dillen is a member of Nieuw Geneco and the Dutch-Flemish Society for Music Theory. As of 2020 his scores are published by Donemus, of which he became a board member in 2022.

Next to his fulltime work as composer, musician and pedagogue, van Dillen is also a visual artist. As composer, he has been a regular member of various juries, among which the composition prize juries, in the Val Tidone Festival Competitions, since 2013.

Oscar van Dillen's personal website: www.oscarvandillen.com

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Phosphorus spectrum from Wikimedia Commons

OIJRECORDS website: www.oij-records.com

Donemus and Donemus Records website: www.donemus.nl

OIJ RECORDS

music is sound and silence