

# La Sinfonia degli Elementi

## Tavola Periodica 150

UNESCO has proclaimed 2019 as the International Year of the Periodic Table of Chemical Elements, published 150 years ago by the Russian chemist Dimitri Mendeleev. The show celebrates this anniversary with a joint scientific and humanistic approach to make the public discover the enchanting reactivity of the elements and their unexpected usefulness in everyday life. A "made in Montani" robot builds a giant periodic table during a chemical-musical performance. This show, in which we intertwined a scenographic chemical reactivity with electronics and robotics to construct the giant periodic table, was a challenging didactic experiment between Chemistry and Music: chemical elements and notes are creative building blocks! As the musician uses the 12 notes to produce new music continually, the chemist continuously designs unique and precious materials using the 118 elements. Chemistry and music share the fact that both are a universal language and activate the circuits of beauty and pleasure: while the notes create lovely melodies, harmonies, and complex rhythms, the chemical elements react spectacularly, producing pleasant contaminations.

The show is a journey through time and space, into literature, art, philosophical reflection on the evolution of science, the stories and locations of the discoverers, and certainly, the right notes for every moment, capable of giving precious synaesthesia. The reactivity of the elements accords with the music of the historical period and the geographical place where a certain element was discovered. In other situations, the music will interpret and even stimulate the reactivity of the element through analogue-digital conversions or interactions of the sound wave with the reaction in progress.

We arrive in Mendeleev's Russia with the music of Borodin, his colleague at the Karlsruhe congress and fervent composer; on the Norman beaches that gave birth to Iodine, we find the art of Monet and the music of Debussy. Bonneau's Dance of the Demons recalls the link between Cobalt and the demon Kobold in Goethe's Faust. Dukas's Apprentice Sorcerer accompanies unexpected alchemic reactions. Vivaldi's "Vento" makes nitrogen and oxygen dance with two chemical dancers. Improvised music based on the musical scales written by Kepler in his "Harmonices Mundi" recalls the combination of the seven metals of the ancient world with their respective planet and their respective divinity. The Anthem of Europe and the reactivity of Europium close the show.

The historicization and contextualization of the discoveries accompany the public on this voyage started in prehistoric times but not yet over.

### CREDITS

**Coordination and Text:** Teresa Cecchi - ITT "G. e M. Montani", Fermo

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**Musicians** - Conservatorio Statale di Musica "G. B. Pergolesi", Fermo

Di Maria Domenico, Fratolocchi Francesco, Leontini Dario, Mandarinò Michela, Nicolini Lucia, Pellegrino Kamil

## Gallery

**6** La sinfonia degli elementi:  
Tavola periodica 150

NOTTE EUROPEA  
DEI RICERCATORI  
EUROPEAN RESEARCHERS NIGHT  
**SHARPER**

AULA MAGNA G. BOSSI  
POLO MONTE DAGO  
Orario: 11,00

**SPECIALE SCUOLE**  
Spettacolo ideato e realizzato dagli studenti dell'ITT G. e M. Montani e del Conservatorio di Musica G.B. Pergolesi di Fermo. Direttore Musiche: M° Massimo Mazzonei.  
A cura di: Istituti: ITT G. e M. Montani di Fermo e Conservatorio di Musica G. B. Pergolesi di Fermo.

































