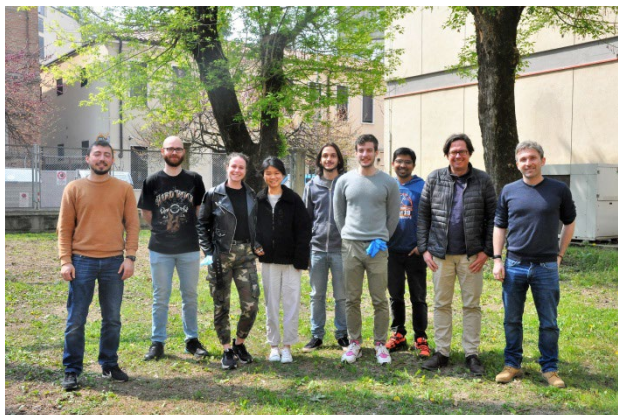


# Systems Chemistry

[www.chimica.unipd.it/systemschemistry](http://www.chimica.unipd.it/systemschemistry)



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Systems chemistry aims at understanding how properties emerge from complex chemical systems. Chemists have so far approached the understanding of biology by reducing complex events to simple reactions and interactions. However, despite decades of intense biomimetic research, it is currently still unclear which conditions are required for a mixture of chemicals to become 'alive' and acquire the ability to grow, communicate, move, evolve, etc... The key point is that these so-called emerging properties cannot be traced back to a single molecule, but are the product of an ensemble of molecules. Systems chemistry is considered the third wave in the evolution of chemistry after the discovery of covalent and noncovalent bond-formation. The capacity to understand the chemical origin of life will permit the development of intelligent materials with 'life-like' properties.

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