



# 1° CONGRESSO SOCIETÀ GEOCHIMICA ITALIANA

FROM THEORETICAL TO APPLIED GEOCHEMISTRY

GENOVA • LUGLIO 2022

## PROGRAM



## SESSIONS

- **GEOCHEMICAL THERMODYNAMICS:  
A TRIBUTE TO THE SCIENTIFIC CAREER OF GIULIO OTTONELLO**

**Conveners: Donato Belmonte (UNIGE) – Marino Vetuschi Zuccolini (UNIGE)**

*“When the knowledge is weak and the situation is complicated, thermodynamic relations are really the most powerful”*. These simple words by Richard Feynman reveal how thermodynamics is key to understanding physico-chemical processes in the Earth and planetary systems. Whether experimental or computational, the thermodynamic approach is able to provide the fundamental link between observations and numerical models and to reconcile micro- and macroscopic phenomena in an integrated view grounded on the basic principles of quantum and statistical physics. This session, organized as recognition to the outstanding scientific and academic career of Giulio Ottonello, aims at gathering contributions in the broad field of geochemical thermodynamics to give an overview of past and current thermodynamic research, discuss future perspectives and address the most relevant challenges in the field. The scientific program will include a plenary lecture given by Giulio along with a number of invited talks by renowned scientists, but it is also open to any contribution dealing with the geochemistry and cosmochemistry of natural or model systems, considered from a thermodynamic perspective. A specific focus will be devoted to the most recent developments in thermodynamics of crystalline solids and liquids, phase stability problems, ab initio calculations and phase diagram simulation, melting and solid-melt-gas phase equilibria at ambient and non-ambient conditions. Contributions on these topics by young researchers and early-career scientists are strongly encouraged.

- **ISOTOPE GEOCHEMISTRY**

**Conveners: Enrico Cannà (UNIMI), Luigi Dallai (UNIROMA), Barbara Nisi (CNR-IGG)**

Isotope Geochemistry is increasingly being used in scientific investigations, from the study of the isotopic fingerprints of rocks and soils (i.e., bulk analyses) to the study of the isotopic variations at high-spatial resolution (e.g., in-situ techniques). The development of high-performance instruments allows for a better understanding of the geological processes governing our planet, by using traditional and non-traditional stable isotopic systematics as well as radiogenic isotopic ones. Particularly relevant are the isotopic geochemical studies concerning the interaction between humans and the environment impacting to their co-evolution at the short- to medium- timescales. This session is aimed at those scientific contributions that have isotopes as the main focus. Presentations of new analytical techniques and methodological/experimental approaches are welcome as well as those including the use of traditional and non-traditional stable and radiogenic isotopes aimed to unravel geological processes. Particular attention will also be given to studies aimed at specific isotope investigations applied to the solid Earth, the environment, paleoclimatic reconstructions, food traceability, cultural heritage and forensic aspects.

- **ENVIRONMENTAL GEOCHEMISTRY**

**Conveners: Carmine Apollaro (UNICAL) – Rosa Cidu (UNICA) – Elisa Sacchi (UNIPV)**

The environmental geochemistry session is concerned with the sources, distribution and interactions of chemical elements in solid (rocks, soils), liquid (surface and groundwater), gaseous (atmosphere) and biological materials. This wide range of substances and compartments is studied with a broad suite of analytical tools, from field measurements, to laboratory assessments to digital modelling methods. Nowadays, the geochemical expertise is crucial to the environmental remediation sector, that has grown rapidly in the last decades. Only a sound geochemical assessment can warrant a sustainable environmental management, from resources exploitation to pollution remediation. The session is devoted to the many aspects of environmental geochemistry, with a particular focus on: 1) the criteria for determining pollution levels as a function of the environmental and geochemical constraints; 2) new approaches to assess the risk of diseases of geochemical nature in different areas; 3) geochemical mapping and data interpolation techniques to delimit the risk zones, where negative health effects due to deficiency or excess of certain chemical elements or compounds are likely to occur.

- **FLUID GEOCHEMISTRY IN GEOTHERMAL AND VOLCANIC ENVIRONMENTS**

**Conveners: Kyriaki Daskalopoulou (University of Potsdam) – Francesco Frondini (UNIPG) – Giancarlo Tamburello (INGV)**

Terrestrial fluids released from various tectonic settings can differ in their geochemical characteristics due to a variable range of pressure and temperature and degree of interaction with the surrounding environment. These fluids are linked to seismic, volcanic, and geothermal activities and carry essential information that contributes to understanding the volcano-tectonic environments from where they are originated. Fluids also play an integral role in Earth degassing and controlling the surface chemistry and climate of Earth. Thus, their study can provide insights on the geochemical cycles at a historical time scale and examine their possible impact on global climate changes. This session welcomes contributions focused on fluid geochemistry that discuss novel sampling and measuring techniques, direct and remote ground- and space-based observations, and modelling studies. Our goal is to provide new insights into volcanic, tectonic and atmospheric processes at local and global scales.

## Tuesday July 5, 2022

### MORNING

12:00-14:00 Registration

### AFTERNOON

14:00-14:15 Congress Opening

14:15-15:00 **So.Ge.I. PhD Awards Ceremony**



**Ilaria Fuoco** [TONANI AWARD]

*Geochemical modelling of natural contaminants in groundwaters and their removal by membrane processes*

**Caterina Gozzi** [TONGIORGI AWARD]

*Weathering and transport processes investigated through the statistical properties of the geochemical landscapes: the case study of the Tiber river basin (Central Italy)*

**Francesco Magi** [PANICHI AWARD]

*Isotope geochemistry of rainfall, thermal and non-thermal waters from the Mt. Amiata area (northern-central Italy)*

15:00-15:45 ● **Riccardo Petrini** [PLENARY – Environmental Geochemistry]  
*Priority environment and health risk. The thallium case-history*

15:45-16:30 ● **Alessandro Aiuppa** [PLENARY – Fluid Geochemistry in Geothermal and Volcanic Environments]  
*Volcanic gas constraints on Carbon concentrations in, and outfluxing from, the Earth's upper mantle*

16:30-17:00 Coffee Break

17:00-17:45 ● **Giovanni Chiodini** [PLENARY – Isotope Geochemistry]  
*Carbon dioxide Earth degassing, heat flux and earthquakes: the case of the Apennines*

17:45-18:45 **SHORT TALKS**

- **M. La Fortezza**, F. Menescardi, D. Belmonte  
*Towards an ab initio physically-consistent thermodynamic dataset for deep mantle phases: the case of  $Mg_2SiO_4$  ringwoodite*
- **P. Randazzo**, A. Caracausi, A. Aiuppa, C. Cardellini, G. Chiodini, W. D'Alessandro, L. Li Vigni, P. Papic, G. Marinkovic, A. Ionescu  
*Active degassing of deep-sourced fluids in central western Europe: new evidences from a geochemical study in Serbia*





- **M. Paternoster**, D. Buttitta, S. Panebianco, A. Caracausi  
*Crustal vs mantle degassing in the High Agri Valley (southern Italy): new evidences from an old borehole of hydrocarbon exploitation*
- **C. Cardellini**, G. Chiodini, A. Frigeri, E. Bagnato, F. Frondini, L. Ricci, A. Ionescu, A. Aiuppa, W. D'Alessandro  
*The MaGa web-based database for the improvement of the knowledge about global CO<sub>2</sub> emissions from volcanoes diffuse degassing*
- **M. Taussi**, B. Nisi, A. Brogi, D. Liotta, M. Perrini, M. Zambrano, M. Zucchi, O. Vaselli  
*Linking soil CO<sub>2</sub> emissions to the structural features of a fault: insights from the Monterotondo-Sasso Pisano area (Larderello geothermal field, Italy)*
- **G. Tamburello**, D. Rouwet, C. Andrade, F. Viveiros F., J.V. Cruz  
*CO<sub>2</sub> budget of Furnas Lake, São Miguel Island, Azores: 3D chemical tomography of a degassing volcanic lake*
- **A. Ionescu**, A. Caracausi, O. Vaselli, K. Daskalopoulou, C. Cardellini, F.L. Forray, B.M. Kis, S. Calabrese, F. Tassi, G. Chiodini, L. Palcsu  
*Tectonically controlled volcanic degassing in the Eastern Carpathians, highlighted by geochemical characterization of mineral waters*
- **F. Gori**, D. Buttitta, M.D. Barberio, M. Barbieri, A. Caracausi, M. Paternoster, M. Petittasu  
*Hydrogeochemical and isotopic studies of groundwater in the Contursi area (southern Apennines)*
- **M. Lazzaroni**, O. Vaselli, J. Cabassi, B. Nisi, D. Rappuoli, A. Marchetti, L. Lancellotti  
*Investigating the Hg isotopic footprint in groundwaters and cinnabar waste from the former mining area of Abbadia San Salvatore (Tuscany, central Italy)*
- **M. Calvi**, L. Adami, L. Bontempo, L. Fiori  
*Stable isotopes analyses of fossil- and bio-based plastics of eyewear sector: a preliminary characterization*
- **N. Barago**, E. Pavoni, F. Floreani, M. Crosera, G. Adami, D. Lenaz, S. Covelli  
*Two-year monitoring of water hydrochemistry in a Pb-Zn Mississippi Valley-Type mine (MVT) in the Southeastern Alps (Raibl, Friuli Venezia Giulia)*
- **E. Petranich**, S. Predonzani, A. Acquavita, N. Mashyanov, S. Covelli  
*Mercury speciation in contaminated coastal sediments using thermo-desorption technique: matrix effects*

## Wednesday July 6, 2022

### MORNING

- 09:00-09:15 ● **Surendra K. Saxena** [KEYNOTE]  
*Intro - Thermodynamic model of the Earth*  
**Career Award Ceremony**
- 09:15-10:00 ● **Giulio Ottonello** [LECTIO MAGISTRALIS]  
*Ab initio Phase Diagrams*
- 10:00-10:30 ● **Jibamitra Ganguly**, A. Aasaduzzaman [KEYNOTE]  
*Gas-grain Interactions in the Solar Nebula and Implications for the Origin of Water in Earth*
- 10:30-11:00 ● **Pascal Richet** [KEYNOTE]  
*Cation speciation and redox state in silicate glasses: Insights from low-temperature calorimetry*
- 11:00-11:30 Coffee Break
- 11:30-12:00 ● **James A.D. Connolly**, M.W. Schmidt [KEYNOTE]  
*Viscosity of olivine, plagioclase, and chromite crystal-mushes and implications for compaction-driven fluid flow*
- 12:00-12:15 ● **M. Murri**, M. Prencipe  
*Thermodynamic properties of quartz from ab initio calculations: the role of anharmonicity*
- 12:15-12:30 ● **N. Campomenosi**, D. Belmonte  
*Ca, Al-rich hydrogarnet thermodynamics and phase stability relations: preliminary results*
- 12:30-12:45 ● M. Merli, C. Bonadiman, **A. Pavese**  
*Iron oxidation state in the Earth's Lower Mantle*
- 12:45-14:15 Lunch Break



### AFTERNOON

- 14:15-14:45 ● **Bartolomeo Civalleri** [KEYNOTE]  
*Quasi-harmonic ab initio calculations of periodic systems: the case of molecular crystals and porous materials*
- 14:45-15:15 ● **Carlo Gatti** [KEYNOTE]  
*Real space approaches to chemical bonding and physical properties*
- 15:15-15:30 ● **D. Ceresoli**, F. Menescardi, D. Belmonte  
*Computational discovery of novel inorganic materials under pressure via genetic evolutionary algorithms*
- 15:30-15:45 ● **F. Menescardi**, D. Ceresoli, D. Belmonte  
*Molecular dynamics strategies to determine the melting curve of CaO*

15:45-16:15 ● **Enrico Bonatti** (KEYNOTE)  
*A "Maverick" Geochemist: Giulio Ottonello*

16:15-16:45 Coffee Break

### TECHNICAL PRESENTATIONS BY SPONSORS

16:45-17:00 **M. Pellegrini**, N. Albrecht (Thermo Fisher Scientific)  
*The contribution of clumped isotopes to paleoclimate and atmospheric research*

17:00-17:15 **G. Virgili**, M. Guerra, A. Vecchio, F. Floreani, E. Mariani, G. Mulas, S. Covelli, O. Vaselli, L. Spinelli (Thearen)  
*Determination of gaseous elemental mercury (GEM) emissions by a non-stationary static accumulation chamber. The case study of Portoscuso (South-West Sardinia)*

17:15-17:45 ● **Eleonora Regattieri**, G. Zanchetta, R.N. Drysdale, B. Giaccio, I. Isola (INVITED)  
*Hydrological significance of  $\delta^{18}O$  composition of speleothems and lakes carbonates from the central Mediterranean: a coherent hydrological framework from past interglacial periods*

17:45-18:00 ● G. Dreossi, **B. Stenni**, M. Masiol, V. Posocco, C. Barbante  
*Ten years of oxygen and hydrogen isotopic composition of daily precipitation at Concordia station, East Antarctica*

18:00-18:15 ● **S. Natali**, G. Zanchetta, M. Doveri, R. Gianecchini, I. Baneschi  
*Is the deuterium excess in precipitation a reliable tracer of the moisture sources in the western Mediterranean? New insights from Tuscany (Central Italy)*

18:15-18:30 ● **A. De Leo**, F. Farina  
*In situ U-Pb and Hf isotopes analyses on zircon from the Giglio Island pluton*

18:30-18:45 ● **L. Magnani**, F. Farina, E. Cannà  
*Evolution of  $\delta^{11}B$  on tourmaline during prograde contact metamorphism in the thermal aureole of the Adamello batholith (Southern Alps, Italy)*

18:45-19:00 ● I. Crotti, **B. Stenni**, A. Landais, A. Quiquet, M. Frezzotti, D. Wilson, M. Severi, F. Ritterbusch, C. Barbante  
*From isotopes to ice sheet dynamics: how new isotopic records from the TALDICE ice core reveal past events of East Antarctic ice sheet retreat*

20:30-23:00 **SOCIAL DINNER**

## Thursday July 7, 2022

### MORNING

- 09:00-09:30 ● **Roberta Parigi** [INVITED]  
*Metal stable isotopes as tracers in environmental geochemistry: Ni isotope fractionation in mine-impacted environments*
- 09:30-09:45 ● **P. Bohleber**, M. Roman, N. Stoll, P. Larkman, B. Stenni, B. Delmonte, C. Barbante  
*Imaging the 2D trace elements distribution in polar ice cores to assess the preservation of the paleoclimate record*
- 09:45-10:00 ● **G. Baccolo**, B. Delmonte, P.B. Niles, G. Cibin, E. Di Stefano, M. Frezzotti, D. Hampai, Y. Iizuka, L. Keller, V. Maggi, A. Marcelli, J. Michalski, C. Snead  
*Deep Antarctic ice as a geochemical reactor: Terrestrial and Martian implications*
- 10:00-10:15 ● **S. Venturi**, F. Tassi, J. Cabassi, A. Randazzo, M. Lazzaroni, F. Capecchiacci, B. Vietina, O. Vaselli  
*Diffusive CH<sub>4</sub> emissions from wetlands: the Porta and Massaciuccoli (northern Tuscany, central Italy) case studies*
- 10:15-10:30 ● **G. Capelli Ghioldi**, F. Tassi, S. Venturi, F. Capecchiacci, O. Vaselli, M. Lazzaroni, B. Vietina  
*An appraisal on methane emissions from wetlands based on direct estimates and theoretical computations: the case of Lake Porta wetland, northern Tuscany (Italy)*
- 10:30-10:45 ● **M. Masiol**, G. Formenton, F. Visin, S. Squizzato, E. Innocente, E. Danesin, M.C. Manghi, A. Abbadessa, F. Menegon  
*Particulate matter pollution across the Veneto Region, a European hotspot for air quality: 15 years of studies*
- 10:45-11:00 ● **A. Randazzo**, S. Venturi, F. Zorzi, G. Bicocchi, F. Tatano, F. Tassi  
*Attenuation of Volatile Organic Compounds (VOCs) in a simulated landfill cover soil system*
- 11:00-11:30 Coffee Break



- 11:30-11:45 ● **F. Floreani**, V. Zappella, A. Acquavita, J. Faganeli, S. Covelli  
*Gaseous mercury evasion from bare and grass-covered contaminated soils at the Isonzo River alluvial plain (North Eastern Italy)*
- 11:45-12:00 ● **S. Fornasaro**, G. Delicato, F. Ciani, G. Morelli, P. Costagliola, V. Rimondi, P. Lattanzi, M. Fioravanti  
*The potential mercury remobilization from soil and biomass in the Mt. Amiata mining district (Italy) during a wildfire*
- 12:00-12:15 ● **J. Cabassi**, M. Lazzaroni, L. Giannini, D. Mariottini, B. Nisi, D. Rappuoli, O. Vaselli  
*The UAV (Unmanned Aerial Vehicle) - Lumex® combination as a new tool to investigate the 3D distribution of GEM (Gaseous Elemental Mercury) in the lower atmosphere in near real-time*
- 12:15-12:30 ● **P. Tuccimei**, G. Galli, M. Soligo, M. Mattia, M. Portaro, A. Briganti  
*Combining forced ventilation with suitable inner coatings to reduce indoor radon levels in a scale model room*
- 12:30-12:45 ● **E. Dore**, R. Biddau, D. Fancello, D. Medas, S. Naitza, N. Rigonat, G. De Giudici, R. Cidu  
*Sources and dispersion of antimony at the abandoned mine of Su Suergiu (SE Sardinia)*
- 12:45-13:00 ● **R. Dessì**, F. Carta, R. Cidu, G. De Giudici, M. Demurtas, M. Ebau, E. Mantega, A. Murgia, P. Olla, M. Testa, G. Uras, P. Valera  
*Soil and groundwater background values at abandoned mining areas of Sardinia*
- 13:00-14:30 Lunch Break

## AFTERNOON

- 14:30-14:45 ● **F. Meloni**, O. Vaselli, B. Nisi, F. Bianchi, D. Rappuoli  
*Distribution of Hg, As and Sb in soils and stream sediments from Abbadia San Salvatore and surrounding areas (Mt. Amiata, southern Tuscany, Italy)*
- 14:45-15:00 ● **F. Frau**, A. Idini, R. Atzori, D. Medas, F. Podda, E. Dore, G. Tempesta, G. Agrosi  
*Inducing pH-controlled formation of LDH for removal of divalent metals from circum-neutral drainage from mining wastes*
- 15:00-15:15 ● **N. Greggio**, A. Buscaroli, D. Zannoni, E. Dinelli  
*Helicrysum italicum (roth) G. Don, a promising species for the phytostabilization of polluted mine sites: a case study in the Montevecchio mine (Sardinia, Italy)*

- 15:15-15:30 ● **D. Medas**, C. Meneghini, C. Pusceddu, I. Carlomagno, G. Aquilanti, E. Dore, V. Mura, F. Podda, V. Rimondi, S. Vacca, R.B. Wanty, G. De Giudici  
*Molecular-scale geo-bio interactions in the rhizosphere-plant system of *Juncus acutus* exposed to different Zn sources*
- 15:30-15:45 ● **A. Idini**, F. Frau, G. Ghiglieri  
*Mineralogical and geochemical studies and application of octacalcium phosphate as precursor of fluorapatite for water defluoridation*
- 15:45-16:00 ● **C. Maccelli**, C. Natali, B. Nisi, M. Casalini, O. Vaselli, S. Venturi, R. Avanzinelli  
*Heavy metals contamination in surface waters and suspended solid loads from the Nievole River Valley sub-basin (Tuscany, Central Italy)*
- 16:00-16:30 Coffee Break
- 16:30-16:45 ● **A. Briganti**, M. Mattia, M. Voltaggio, P. Tuccimei, M. Soligo, E. Rainaldi  
*Tracing vertical distribution of NAPL contaminations: two case studies*
- 16:45-17:00 ● **G. Viti**, F. Tassi, O. Vaselli  
*Geochemical study of surficial waters from the wetland north of Florence*
- 17:00-17:15 ● **M. Rotiroti**, C. Zanotti, M. Caschetto, T. Bonomi, L. Fumagalli  
*Local natural background levels in groundwater for selected redox-sensitive species in Lombardy region (N Italy)*
- 17:15-17:30 ● **E. Pavoni**, E. Petranich, F. Floreani, M. Crosera, G. Adami, J. Faganeli, S. Covelli  
*Effects of hypoxia on biogeochemical cycling of nutrients and trace elements in a stratified estuarine system (Gulf of Trieste, northern Adriatic Sea)*

17:30-18:30

**SHORT TALKS**

- **B. Pedone**, W. D'Alessandro, F. Brugnone, L. Li Vigni, F. Parello, S. Bellomo, L. Brusca, F. Grassa, V. Prano, S. Calabrese  
*Geochemical investigation of trace metal pollutants in the Oreto river, Palermo (Italy)*
- D. De Giorgi, V. Gargano, C. Rossiello, C. Compostella, E. Ferrari, G. Sessa, C. Colombi, E. Cuccia, U. Dal Santo, **M. Tiepolo**  
*Historical trends of Pb pollution in the metropolitan area of Milano*
- G. Zatti, M. Bergamini, **E. Sacchi**  
*Assessing the natural background levels of potentially toxic elements in groundwater from a former asbestos mine in Serpentinite (Balangero, north Italy): the influence of nitrates*





- S. Panebianco, **M. Paternoster**, D. Buttitta, A. Caracausi, F. Zummo, G. Mongelli  
*Major, minor and trace elements distribution in the groundwater of High Agri Valley (southern Apennines): environmental constraints*
- **N. Voltattorni**, S. Giammanco, G. Galli, A. Gasparini, G. Pecoraino  
*HEAVEN: a stairway for risk assessment from radioactive volcanic emissions*
- A. Sciarra, **L. Pizzino**, G. Galli, L. Ruggiero, S. Graziani, T. Ricci, R. Nave, S.E. Beaubien, G. Ciotoli, S. Bigi  
*Indoor Radon Measurements in public schools and dwellings in the Ciampino municipality (Greater Rome Metropolitan Area) and its risk perception assessment*
- **M. Ebau**, F. Carta, G. Floris, E. Dore, R. Biddau, G. De Giudici, R. Dessì, M. Testa, G. Uras, R. Cidu  
*Assessing baseline concentrations of aqueous contaminants at abandoned mines*
- **M. Mattia**, P. Tuccimei, M. Soligo, M. Portaro, F. Bellatreccia, L. Rustico  
*Study of underground cavities using total gamma radiation mapping: case studies in Roma (Italy)*
- **R. Biagi**, F. Tassi, S. Caliro, F. Capeccchiacci, S. Venturi  
*Impact on air quality of carbon and sulfur volatile compounds emitted from hydrothermal discharges: the case study of Pisciarelli (Campi Flegrei, South Italy)*
- **F. Brugnone**, W. D'Alessandro, F. Parello, F. Saiano, M. Pennisi, M. Liotta, S. Bellomo, L. Brusca, A.M. Abita, L. Li Vigni, S. Calabrese  
*Major and trace elements characterization of atmospheric deposition in volcanic, urban and industrial areas of Sicily (Italy): preliminary results*
- R. Biddau, S. Da Pelo, L. Marcia, M. Lorrari, M. Testa, E. Dore, P. Botti, **R. Cidu**  
*Distinguishing sources of nitrate in groundwater*
- **C. Gozzi**, A. Buccianti, O. Vaselli  
*Evaluating the Performance of Statistical Indices to Explore Macroscale Geochemical Evolution of Watersheds*

## Friday July 8, 2022

### MORNING

- 09:00-09:30 • **Gianluigi Ortenzi**, F. Sohl, L. Noack [INVITED]  
*Simulations of volcanic outgassing and volatile chemical speciation for investigating the atmospheres of rocky planets*
- 09:30-09:45 • **G. Montegrossi**, F. Meloni, B. Christenson  
*Modeling of fluid-rock interaction processes at White Island (NZ)*
- 09:45-10:00 • **M. Liotta**  
*Element volatilization during lava lake degassing as inferred from acid rain*
- 10:00-10:15 • **A. Ricci**, B.I. Kleine, J. Fiebig, J. Gunnarsson-Robin, K.M. Kamunya, B. Mountain, A. Stefánsson  
*Equilibrium-kinetics interplay controls molecular hydrogen abundance and hydrogen isotope composition in hydrothermal fluids*
- 10:15-10:30 • **B. Cantucci**, M. Piochi, G. Montegrossi  
*Geochemical modelling of hydrothermal alteration at the San Vito Area of the Campi Flegrei geothermal system*
- 10:30-10:45 • **M. Lelli**, T.G. Kretzschmar, J. Cabassi, M. Doveri, J.I. Sanchez-Avila, F. Gherardi, G. Magro, F. Norelli  
*Fluids flow path in the Los Humeros Geothermal Field: inference from geochemical surveys*
- 10:45-11:00 • **F. Tassi**, A. Repetto, A. Randazzo, F. Capecciacci, S. Venturi, J. Cabassi, R. Isaia, S. Caliro, O. Vaselli  
*Measurements of CH<sub>4</sub> fluxes from lakes: the case of Lake Astroni, Phlegraean Fields, southern Italy*
- 11:00-11:30 Coffee Break
- 11:30-11:45 • **L. Li Vigni**, K. Daskalopoulou, S. Calabrese, F. Parello, C. Cardellini, S. Caliro, G. Chiodini, W. D'Alessandro  
*Carbon degassing through karst hydrosystems of Greece*
- 11:45-12:00 • **L. Ricci**, F. Frondini, D. Morgavi, G. Boudoire, M. Laumonier, S. Caliro, C. Cardellini, G. Chiodini  
*Chemical and isotopic characterization of fluids circulating in the Massif Central (France) to investigate the regional degassing process*

- 12:00-12:15 ● **L. Chemeri**, O. Vaselli, F. Tassi, J. Cabassi, F. Capecchiacci, M. Lazzaroni, A.L. Rizzo, F. Grassa  
*Geochemical and isotopic characterization of the groundwaters in the Mugello Basin (Tuscany, Central Italy) and possible insights into earthquake forecast*
- 12:15-12:30 ● **L. Pizzino**, D. Cinti, F. Grassa, A. Sciarra  
*Geochemical monitoring in both cold and thermal aquifers in the Irpinia region (southern Apennines): first results from the INGV project "Myburp"*
- 12:30-12:45 ● D. Cinti, C. Cardellini, G. Chiodini, A. Gasparini, L. Pizzino, A. Sciarra, **N. Voltattorni**, C. Apollaro, G. Vespasiano, A. Deonofrio  
*Geochemical monitoring in seismically active areas in southern Apennine (Italy) in the framework of FURTHER project: first results*

## SCIENTIFIC COMMITTEE

Donato Belmonte (UNIGE), Sergio Calabrese (UNIPA), Paola Iacumin (UNIPR), Mauro Masiol (UNIVE), Michele Paternoster (UNIBAS), Giovannella Pecoraino (INGV), Monia Procesi (INGV), Barbara Stenni (UNIVE), Massimo Tiepolo (UNIMI), Daniela Varrica (UNIPA), Marino Vetusch Zuccolini (UNIGE)

## ORGANIZING COMMITTEE

Donato Belmonte (UNIGE), Stefano Caliro (INGV), Francesco Capecchiacci (UNIFI), Enrico Dinelli (UNIBO), Barbara Nisi (CNR-IGG), Orlando Vaselli (UNIFI), Stefania Venturi (UNIFI), Marino Vetusch Zuccolini (UNIGE)

## GRAPHIC EDITORS AND DESIGNERS

Sergio Calabrese (UNIPA), Rossella Celi (INGV), Francesca Di Stefano (INGV), Giovannella Pecoraino (INGV), Monia Procesi (INGV), Stefania Venturi (UNIFI)



1° CONGRESSO  
SOCIETÀ GEOCHIMICA ITALIANA  
FROM THEORETICAL TO APPLIED GEOCHEMISTRY  
GENOVA - LUGLIO 2022