

PERSONAL INFORMATION Paolo Lotti

CURRENT POSITION Ricercatore a tempo determinato di tipo A (RTD-A)
Earth Sciences Department
University of Milano

WORK EXPERIENCE

From March 1st, 2017 - present**Ricercatore a tempo determinato di tipo A (RTD-A)**

Earth Sciences Department
University of Milano
Via Botticelli 23 - 20133 Milano

- Research in Applied Mineralogy (see attached extended CV)
- Teaching (4 cfu) within the course “Georisorse e ambiente: tipologie, gestione e sostenibilità”, optional course on the third year of the Bachelor in Natural Sciences.
- Member of the commission for college fair in Natural Sciences
- Tutor or co-tutor of students theses in the bachelors of Geological and Natural Sciences and in the Master in Earth Sciences

From February 8th, 2016 to
February 7th, 2017**Scientific collaborator (post-doc)**

Elettra Sincrotrone Trieste S.c.P.A.
Strada Statale 14, km 163.5 - 34149 Basovizza, Trieste

- Research in Applied Mineralogy (see attached extended CV)
- Maintenance and development of the Xpress beamline, particularly concerning the setup for in situ high-pressure single-crystal diffraction
- Technical assistance to the users of the Xpress beamline

From January 1st, 2014 to
December 31st, 2015**Postdoctoral fellow**

Earth Sciences Department
University of Milano
Via Botticelli 23 - 20133 Milano

- Research in Applied Mineralogy (see attached extended CV), within the FIRB project “ImPACT: Impose Pressure and Change Technology”

From March 1st, 2014 to May 31st,
2014**Visiting scientist**

Institute for Mineralogy and Petrography
University of Innsbruck
Innrain 52 - 6020 Innsbruck, Austria

- Research in Applied Mineralogy (see attached extended CV)

EDUCATION AND TRAININGFrom January 1st, 2011 to
December 31st, 2013**PhD in Earth Sciences**

Earth Sciences Department
University of Milano
Via Botticelli 23 - 20133 Milano

EQF level: 8

- Research project in mineralogical crystallography.
- PhD thesis: “Cancrinite-group minerals at non-ambient conditions: a model of the elastic behavior and structure evolution”

From October 1st, 2007 to February 25th, 2010 **Master degree in Geology**

EQF level: 7

Earth Sciences Department
University of Milano
Via Botticelli 23 - 20133 Milano

- *Curriculum* of Geomaterials. Advanced courses of Mineralogy, Crystallography, Ore minerals and resources, magmatic and metamorphic Petrography and experimental Petrology.
- Master thesis in Mineralogy: “Comportamento in alta pressione di fengiti naturali”
- Final mark: 110/110 *cum laude*

From October 1st, 2004 to November 23rd, 2007 **Bachelor degree in Geological Sciences**

EQF level: 6

Earth Sciences Department
University of Milano
Via Botticelli 23 - 20133 Milano

- Introductory courses to Geological Sciences, including Mathematics, Physics and Chemistry
- Thesis in ore minerals and geological resources: “Studio comparato delle mineralizzazioni a cromite delle miniere di Xerolivado, Rizo, Aetoraches, Potamia (complesso di Vourinos, Grecia)”
- Final mark: 110/110 *cum laude*

From September 1999 to June 2004 **High School diploma: Liceo scientifico**

EQF level: 5

Liceo Scientifico Statale “Giordano Bruno”
Sezione distaccata di Cassano d’Adda
Via Papa Giovanni XXIII 223 - 20062 Cassano d’Adda (MI)

- Final mark: 92/100

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Independent user	Independent user	Proficient user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

ECDL certificate (in 2003)

Replace with your other computer skills. Specify in what context they were acquired. Example:

- good command of office suite (word processor, spread sheet, presentation software)
- good command of crystallographic softwares for data analysis and structure refinements (e.g. Crysalis, GSAS, JANA2006, Shelx).

Driving licence B

ADDITIONAL INFORMATION

Publications in peer-reviewed journals
 Abstracts in conference proceedings
 Invited seminars

- See attached extended CV
- See attached extended CV
- P. Lotti (2017) La luce di sincrotrone per le Scienze della Terra. Invited lecture talk at the Geosciences Department of the University of Padua. Wednesday, 8th November 2017.
- P. Lotti (2017) Pressure: a tool for promoting the sponge-like behavior of zeolites. Invited seminar talk for the Applied Mineralogy and Crystallography group of the Institute for Mineralogy and Petrology, University of Innsbruck, Austria. Wednesday, 25th October 2017.
- P. Lotti (2017) Pressure: a tool for promoting the sponge-like behavior of zeolites. 2017/2018 Academic Season Seminar Lectures, Institute for Mineralogy and Crystallography, University of Vienna, Austria. Friday, 13th October 2017.
- P. Lotti (2017) Microporous compounds at non-ambient (P,T) conditions: mechanisms of structure deformation, phase transitions and crystal-fluid interactions. Invited talk as recipient of the Mario Nardelli Prize 2017. Proc. 47th Italian Crystallographic Association Annual Meeting. Perugia, 26-29 June 2017.
- P. Lotti (2014) Cancrinite-group minerals at non-ambient conditions: a model of the elastic behavior and structure evolution. Invited talk as recipient of AIC PhD Thesis Prize 2014. Proc. 44th Italian Crystallographic Association Annual Meeting. Firenze, 15-18 September 2014.

Honours and awards

- 2013 - “Giuseppe Schiavinato” prize of the *Lincei* National Academy for Master theses in Mineralogy with petrological implications.
- 2013 - Grant prize for a research period in a foreign country by the Italian Society of Mineralogy and Petrology (SIMP).
- 2014 - National prize for the best PhD thesis by the Italian Crystallographic Association (AIC).
- 2015 - National prize for the best PhD thesis by the Italian Society of Mineralogy and Petrology (SIMP)
- 2016 - “Ugo Panichi” prize by the Italian Society of Mineralogy and Petrology (SIMP) for young researchers.
- 2017 - “Mario Nardelli” prize by the Italian Crystallographic Association (AIC) for young researchers.

Editorial roles

From 2017, associate editor of *American Mineralogist*

Membership of PhD teaching boards

From 2018, member of the teaching board of the PhD course in Earth Sciences of the University of Milano

Roles in scientific societies

- From January 1st, 2018, member of the executive board of the Italian Zeolites Association (AIZ) for the period 2018-2021
- From January 1st, 2018, member of the commission for teaching of the Italian Crystallographic Association (AIC) for the period 2018-2020

Memberships

- Member of the Italian Society of Mineralogy and Petrology (SIMP)
- Member of the Italian Crystallographic Association (AIC)
- Member of the Italian Zeolites Association (AIZ)
- Member of the Mineralogical Society of America (MSA)

ANNEXES

- Extended CV with a full description of the research activity and the full publications list, including the abstracts in conference proceedings

Personal information

I authorize the handling of personal information in this curriculum, according to D.Lgs n. 196/03 and following modifications and Regulations EU 679/2016 (General Regulations concerning Data Protection or GRDP) and art. 7 of University Regulations concerning protection of personal information.

I authorize, according to D.lgs 14/03/2013 n. 33 concerning transparency, in case of conferment of the position and of the fellowship, the publication of this curriculum in the web site of Università degli Studi di Milano in the section "Amministrazione trasparente", "Consulenti e collaboratori".

Date, December 28th, 2018

Signature



ANNEX TO THE CURRICULUM VITAE ET STUDIORUM OF PAOLO LOTTI

Research interests and activities

- Study of the behavior of inorganic microporous compounds (zeolites and zeolite-like materials) at non-ambient temperature and pressure conditions. The research activity is focused to the characterization of phase stability, elastic behavior (compressibility and thermal expansivity) and structural deformation mechanisms at the atomic scale of these compounds at varying T and P . In addition, the behavior of zeolites when compressed in potentially penetrating fluids is investigated. The research activity is devoted to the characterization of the crystal-fluid interactions induced by pressure. In particular: 1) the influence of the crystal-fluid interactions on the bulk elastic behavior; 2) the identification of P -induced penetration of molecules into the zeolites cavities and their localization in the structural voids; 3) the characterization of the reversibility extent of crystal-fluid interactions. More in general, this research activity is addressed to the use of pressure to drive a change on the physical-chemical properties of zeolites, through potentially penetrating P -fluids
- Characterization of Cs-bearing inorganic compounds with potential applications as nuclear waste disposals of radioactive Cs radionuclides. In particular, the study of their behavior under extreme conditions (i.e., phase stability in response to temperature, pressure and chemical leaching) is carried out.
- Characterization of the behavior at non-ambient conditions of natural and synthetic materials with potential technological applications in the field of ceramics, with a particular focus on borate compounds.
- Characterization of the high-pressure elastic and structural behavior of carbonates and hydrous silicate minerals, mainly by *in situ* X-ray diffraction experiments.

Full publications list

- 1) G.D. Gatta, **P. Lotti** (2019) Systematics, crystal structures, and occurrences of zeolites. In: M. Mercurio, B. Sarkar and A. Langella (Eds.) *Modified clay and zeolite nanocomposite materials*, 1-16, Elsevier, Amsterdam, The Netherlands.
- 2) B. Joseph, S. Caramazza, F. Capitani, T. Clarté, F. Ripanti, P. Lotti, A. Lausi, D. Di Castro, P. Postorino, P. Dore (2018) Coexistence of pressure-induced structural phases in bulk black phosphorus: a combined X-ray diffraction and Raman study up to 18 GPa. *Journal of Physics: Condensed Matter*, in press, DOI: <https://doi.org/10.1088/1361-648X/aaebe5>.
- 3) D. Comboni, **P. Lotti**, G.D. Gatta, M. Lacalamita, E. Mesto, M. Merlini, M. Hanfland (2019) Armstrongite at non-ambient conditions: An in-situ high-pressure single-crystal X-ray diffraction study. *Microporous and Mesoporous Materials*, 274, 171-175. DOI: <https://doi.org/10.1016/j.micromeso.2018.07.047>.
- 4) **P. Lotti**, D. Comboni, M. Merlini, M. Hanfland (2018) High-pressure behavior of intermediate scapolite: compressibility, structure deformation and phase transition. *Physics and Chemistry of Minerals*, in press. DOI: 10.1007/s00269-018-0976-8.
- 5) **P. Lotti**, G.D. Gatta, N. Demitri, G. Guastella, S. Rizzato, M.A. Ortenzi, F. Magrini, D. Comboni, A. Guastoni, M.T. Fernandez Diaz (2018) Crystal-chemistry and temperature behavior of the natural hydrous borate colemanite, a mineral commodity of boron. *Physics and Chemistry of Minerals*, 45, 405-422. DOI: 10.1007/s00269-017-0929-7.

- 6) D. Comboni, **P. Lotti**, G.D. Gatta, M. Merlini, H-P. Liermann, D.J. Frost (2018) Pargasite at high pressure and temperature. *Physics and Chemistry of Minerals*, 45, 259-278. DOI: 10.1007/s00269-017-0915-0.
- 7) G.D. Gatta, **P. Lotti**, G. Tabacchi (2018) The effect of pressure on open-framework silicates: elastic behaviour and crystal-fluid interaction. *Physics and Chemistry of Minerals*, 45, 115-138. DOI: 10.1007/s00269-017-0916-z.
- 8) D. Comboni, G.D. Gatta, **P. Lotti**, M. Merlini, M. Hanfland (2018) Crystal-fluid interactions in laumontite. *Microporous and Mesoporous Materials*, 263, 86-95. DOI: 10.1016/j.micromeso.2017.12.003.
- 9) G.D. Gatta, **P. Lotti**, D. Comboni, M. Merlini, P. Vignola, H-P. Liermann (2017) High-pressure behaviour of (Cs,K)Al₄Be₅B₁₁O₂₈ (londonite): a single-crystal synchrotron diffraction study up to 26 GPa. *Journal of the American Ceramic Society*, 100, 4893-4901. DOI: 10.1111/jace.14936.
- 10) M. Merlini, V. Cerantola, G.D. Gatta, M. Gemmi, M. Hanfland, I. Kuppenko, **P. Lotti**, H. Müller, L. Zhang (2017) Dolomite-IV: candidate structure for a carbonate in the Earth's lower mantle. *American Mineralogist*, 102, 1763-1766. DOI: <http://dx.doi.org/10.2138/am-2017-6161>.
- 11) **P. Lotti**, G.D. Gatta, D. Comboni, G. Guastella, M. Merlini, A. Guastoni, H-P. Liermann (2017) High-pressure behavior and *P*-induced phase transition of CaB₃O₄(OH)₃·H₂O (colemanite). *Journal of American Ceramic Society*, 100, 2209-2220. DOI: DOI: 10.1111/jace.14730
- 12) C. Marini, B. Joseph, S. Caramazza, F. Capitani, M. Bendele, I. Kantor, **P. Lotti**, O. Mathon, S. Pascarelli, P. Postorino (2017) Local structure investigation of β-Ni(OH)₂ under pressure using combined Raman and Ni K-edge extended X-ray absorption fine structure studies. *High Pressure Research*, 37, 10 pp. DOI: <http://dx.doi.org/10.1080/08957959.2016.1269174>.
- 13) D. Comboni, G.D. Gatta, **P. Lotti**, M. Merlini, H.-P. Liermann (2017) On the *P*-induced behavior of the zeolite phillipsite; an in situ synchrotron X-ray diffraction study. *Physics and Chemistry of Minerals*, 44, 1–20. DOI: 10.1007/s00269-016-0832-7.
- 14) N. Rotiroti, P. Vignola, D. Bersani, W.B. Simmons, A.U. Falster, R.W. Whitmore, J.W. Nizamoff, **P. Lotti**, A. Risplendente, A. Pavese (2016) On the Crystal-Chemistry of Bjarebyite, BaMn²⁺₂Al₂(PO₄)₃(OH)₃ from the Palermo#1 Pegmatite, Grafton County, New Hampshire, Usa. *Canadian Mineralogist*, 54, 1033-1041. doi: 10.3749/canmin.1500112.
- 15) G.D. Gatta, A. Brundu, P. Cappelletti, G. Cerri, B. de' Gennaro, M. Farina, P. Fumagalli, L. Guaschino, **P. Lotti**, M. Mercurio (2016) New insights on pressure, temperature, and chemical stability of CsAlSi₅O₁₂, a potential host for nuclear waste. *Physics and Chemistry of Minerals*, 43, 639–647, DOI: doi:10.1007/s00269-016-0823-8.
- 16) M. Merlini, F. Sapelli, P. Fumagalli, G.D. Gatta, **P. Lotti**, S. Tumiatì, M. Abdellatief, A. Lausi, J. Plaisier, M. Hanfland, W. Crichton, J. Chantel, J. Guignard, C. Meneghini, A. Pavese, S. Poli (2016) High-temperature and high-pressure behavior of carbonates in the ternary diagram CaCO₃–MgCO₃–FeCO₃. *American Mineralogist*, 101, 1423–1430. DOI: <http://dx.doi.org/10.2138/am-2016-5458>.
- 17) **P. Lotti**, G.D. Gatta, D. Comboni, M. Merlini, L. Pastero, M. Hanfland (2016) AlPO₄-5 zeolite at high pressure: Crystal–fluid interaction and elastic behavior. *Microporous and Mesoporous Materials*, 228, 158–167. DOI: <http://dx.doi.org/10.1016/j.micromeso.2016.03.030>
- 18) G.D. Gatta, **P. Lotti** (2016) Cancrinite-group minerals: Crystal-chemical description and properties under non-ambient conditions – A review. *American Mineralogist*, 101, 253–265. DOI: <http://dx.doi.org/10.2138/am-2016-5282>.
- 19) **P. Lotti**, R. Arletti, G.D. Gatta, S. Quartieri, G. Vezzalini, M. Merlini, V. Dmitriev, M. Hanfland (2015) Compressibility and crystal-fluid interactions in all-silica ferrierite at high pressure. *Microporous and Mesoporous Materials*, 218, 42-54. DOI: <http://dx.doi.org/10.1016/j.micromeso.2015.06.044>
- 20) **P. Lotti**, G.D. Gatta, M. Merlini, H-P. Liermann (2015) High-pressure behavior of synthetic mordenite-Na: an in situ single-crystal synchrotron X-ray diffraction study. *Zeitschrift für Kristallographie*, 230, 201-211. DOI 10.1515/zkri-2014-1796
- 21) G.D. Gatta, **P. Lotti**, M. Merlini, H-P. Liermann, A. Lausi, G. Valdré, A. Pavese (2015) Elastic behaviour and phase stability of pyrophyllite and talc at high pressure and temperature. *Physics and Chemistry of Minerals*, 42, 309-318. DOI 10.1007/s00269-014-0721-x
- 22) T. Pippinger, R. Miletich, M. Merlini, **P. Lotti**, P. Schouwink, T. Yagi, W.A. Crichton, M. Hanfland (2015)

- Puzzling calcite-III dimorphism: crystallography, high-pressure behavior, and pathway of single-crystal transitions. *Physics and Chemistry of Minerals*, 42, 29-43. DOI 10.1007/s00269-014-0696-7
- 23) G.D. Gatta, G. Nénert, G. Guastella, **P. Lotti**, A. Guastoni, S. Rizzato (2014) A single-crystal neutron and X-ray diffraction study of a Li,Be-bearing brittle mica. *Mineralogical Magazine*, 78, 55-72. DOI: 10.1180/minmag.2014.078.1.05
 - 24) R. Miletich, G.D. Gatta, T. Willi, P.W. Mirwald, **P. Lotti**, M. Merlini, N. Rotiroti, T. Loerting (2014) Cordierite under hydrostatic compression: Anomalous elastic behavior as a precursor for a pressure-induced phase transition. *American Mineralogist*, 99, 479-492. DOI: <http://dx.doi.org/10.2138/am.2014.4487>
 - 25) **P. Lotti**, G.D. Gatta, M. Merlini, M. Hanfland (2014) High-pressure behavior of davyne [CAN-topology]: An in situ single-crystal synchrotron diffraction study. *Microporous and Mesoporous Materials*, 198, 203-214. DOI: <http://dx.doi.org/10.1016/j.micromeso.2014.07.014>
 - 26) T. Pippinger, R. Miletich, H. Effenberger, G. Hofer, **P. Lotti**, M. Merlini (2014) High-pressure polymorphism and structural transitions of norsethite, BaMg(CO₃)₂. *Physics and Chemistry of Minerals*, 41, 737-755. DOI 10.1007/s00269-014-0687-8
 - 27) **P. Lotti**, G.D. Gatta, N. Rotiroti, F. Cámara, G.E. Harlow (2014) The high-pressure behavior of balliranoite: a cancrinite group mineral. *Zeitschrift für Kristallographie*, 229, 63-76. DOI 10.1515/zkri-2013-1626
 - 28) G.D. Gatta, **P. Lotti**, M. Merlini, D. Caputo, P. Aprea, A. Lausi, C. Colella (2014) Thermo-elastic behavior and P/T phase stability of TlAlSiO₄ (ABW). *Microporous and Mesoporous Materials*, 197, 262-267. DOI: <http://dx.doi.org/10.1016/j.micromeso.2014.06.015>
 - 29) G.D. Gatta, D. Comboni, M. Alvaro, **P. Lotti**, F. Cámara, M.C. Domeneghetti (2014) Thermoelastic behavior and dehydration process of cancrinite. *Physics and Chemistry of Minerals*, 41, 373-386. DOI 10.1007/s00269-014-0656-2
 - 30) G.D. Gatta, **P. Lotti**, G. Nénert, V. Kahlenberg (2014) On the crystal structure and low-temperature behaviour of davyne: A single-crystal X-ray and neutron diffraction study. *Microporous and Mesoporous Materials*, 185, 137-148. DOI: <http://dx.doi.org/10.1016/j.micromeso.2013.10.027>
 - 31) G.D. Gatta, **P. Lotti**, M. Merlini, H-P. Liermann, M. Fisch (2013) High-pressure behavior and phase stability of Al₅BO₉, a mullite-type ceramic material. *Journal of the American Ceramic Society*, 96, 2583-2592. DOI: 10.1111/jace.12411
 - 32) G.D. Gatta, **P. Lotti**, V. Kahlenberg (2013) The low-temperature behavior of balliranoite (CAN topology): an in-situ single-crystal X-ray diffraction study. *Microporous and Mesoporous Materials*, 174, 44-53. DOI: <http://dx.doi.org/10.1016/j.micromeso.2013.02.028>
 - 33) G.D. Gatta, **P. Lotti**, F. Nestola, M. Merlini, D. Pasqual, A. Lausi (2013) Thermo-elastic behaviour of Be₂BO₃OH (hambergite) up to 7 GPa and 1,100 K. *Physics and Chemistry of Minerals*, 40, 401-409. DOI 10.1007/s00269-013-0578-4
 - 34) G.D. Gatta, **P. Lotti**, F. Nestola (2012) On the high-pressure behavior of gobbinsite, the natural counterpart of the synthetic zeolite Na-P2. *Microporous and Mesoporous Materials*, 163, 259-269. DOI: <http://dx.doi.org/10.1016/j.micromeso.2012.07.005>
 - 35) G.D. Gatta, M. Merlini, **P. Lotti**, A. Lausi, M. Rieder, (2012) Phase stability and thermo-elastic behaviour of CsAlSiO₄ (ABW): a potential nuclear waste disposal material. *Microporous and Mesoporous Materials*, 163, 147-152. DOI: <http://dx.doi.org/10.1016/j.micromeso.2012.07.010>
 - 36) G.D. Gatta, **P. Lotti**, V. Kahlenberg, U. Haefeker, (2012) The low-temperature behavior of cancrinite: an in situ single-crystal X-ray diffraction study. *Mineralogical Magazine*, 76, 933-948. DOI: 10.1180/minmag.2012.076.4.10
 - 37) **P. Lotti**, G.D. Gatta, N. Rotiroti, F. Càmara, (2012) High-pressure study of a natural cancrinite, *American Mineralogist*, 97, 872-882. DOI: <http://dx.doi.org/10.2138/am.2012.4039>
 - 38) G.D. Gatta, **P. Lotti**, (2011) On the low-temperature behavior of the zeolite gobbinsite: A single-crystal X-ray diffraction study, *Microporous and Mesoporous Materials*, 143, 467-476. doi:10.1016/j.micromeso.2011.03.036
 - 39) G.D. Gatta, N. Rotiroti, **P. Lotti**, A. Pavese, N. Curetti, (2010) Structural evolution of a 2M₁ phengite mica up to 11 GPa: an in-situ single-crystal X-ray diffraction study. *Physics and Chemistry of Minerals*, 37, 581-591. DOI 10.1007/s00269-010-0359-2

- 40) G.D. Gatta, N. Rotiroti, A. Pavese, **P. Lotti**, N. Curetti, (2009) Structural evolution of a 3T phengite mica up to 10 GPa: an in situ single-crystal X-ray diffraction study. *Zeitschrift für Kristallografie*, 224, 302-310. DOI10.1524/zkri.2009.1131

Abstracts in conference proceedings

- G. Grieco, **P. Lotti**, D. Milani, A. Aldighieri, M. Bussolesi, P. Marescotti (2018) The Cortabbio-Primaluna barite mine (Valsassina, Lc): emotion, experience and disability. *Proc. of the joint SGI-SIMP Conference. Catania, 12-14 September 2018*
- E. Mesto, G. Cametti, M. Lacalamita, D. Comboni, G.D. Gatta, **P. Lotti**, M. Merlini, M. Hanfland, E. Schingaro (2018) An *in situ* HT-HP single crystal X-ray diffraction study of armstrongite, a microporous zirconium silicate. *Proc. of the joint SGI-SIMP Conference. Catania, 12-14 September 2018.* (oral Mesto).
- D. Comboni, G.D. Gatta, **P. Lotti**, M. Merlini, M. Hanfland (2018) High-pressure adsorption of methanol in synthetic MFI- zeolites. *Proc. of the joint SGI-SIMP Conference. Catania, 12-14 September 2018.*
- D. Comboni, G.D. Gatta, A. Guastoni, **P. Lotti** (2018) High-temperature behavior and dehydration of the natural borate colemanite. *Proc. of the joint SGI-SIMP Conference. Catania, 12-14 September 2018.*
- **P. Lotti**, G.D. Gatta, L. Gigli, M. Merlini, D. Comboni, H. Krüger (2018) Intermediate scapolite: crystal chemistry, structure and behavior at non-ambient (*P,T*)-conditions. *Proc. of the joint SGI-SIMP Conference. Catania, 12-14 September 2018.* (oral presentation)
- **P. Lotti**, D. Comboni, L. Gigli, M. Merlini, G.D. Gatta, H. Krüger (2018) High-pressure and high-temperature behaviors of intermediate scapolite by in situ synchrotron X-ray diffraction. *Proc. of the 3rd joint AIC-SILS Conference. Roma, 25-28 June 2018.* (P)
- D. Comboni, G.D. Gatta, M. Merlini, **P. Lotti**, M. Hanfland (2018) On the crystal-fluid interactions in laumontite. *Proc. of the AIZ (Italian Zeolites Association) Days 2018. Modena, 20-21 June 2018.* (oral Comboni).
- **P. Lotti**, G.D. Gatta, N. Demitri, D. Comboni, M. Merlini, S. Rizzato, H-P. Liermann (2017) High-pressure and low-temperature behavior of colemanite: in situ synchrotron X-ray diffraction experiments. *Proc. of the 25th Annual Conference of the Italian Synchrotron Light Society. Trieste, 5-6 October 2017.* (P)
- **P. Lotti**, G.D. Gatta, D. Comboni, M. Merlini, H-P. Liermann (2017) From Nature to materials science: (Cs,K)Al₄Be₅B₁₁O₂₈ (londonite) as a super-hard material. *Proc. of the SIMP-SGI-SOGEI-AIV Conference. Pisa, 3-6 September 2017.* (oral presentation)
- D. Comboni, G.D. Gatta, **P. Lotti**, M. Merlini, M. Hanfland (2017) New insights on the hydration of the zeolite laumontite: a natural nano-sponge. *Proc. of the SIMP-SGI-SOGEI-AIV Conference. Pisa, 3-6 September 2017.*
- M. Merlini, V. Cerantola, G.D. Gatta, M. Gemmi, M. Hanfland, I. Kuppenko, **P. Lotti**, H. Müller, L. Zhang (2017) The crystal structure of dolomite-IV, a high-pressure polymorph of dolomite, at 115 GPa. *Proc. of the SIMP-SGI-SOGEI-AIV Conference. Pisa, 3-6 September 2017.*
- G.D. Gatta, D. Comboni, **P. Lotti**, M. Merlini, A. Guastoni (2017) The behavior at non-ambient conditions of colemanite: a hydrous Ca-borate. *Proc. of the SIMP-SGI-SOGEI-AIV Conference. Pisa, 3-6 September 2017.*
- D. Comboni, G.D. Gatta, **P. Lotti**, M. Merlini, H-P. Liermann, D.J. Frost (2017) Pargasite at extreme conditions: a comprehensive *P-T* study. *Proc. of the SIMP-SGI-SOGEI-AIV Conference. Pisa, 3-6 September 2017.*
- **P. Lotti**, G.D. Gatta, N. Demitri, D. Comboni, M. Merlini, S. Rizzato (2017) The natural borate colemanite at non-ambient conditions: behavior at low-temperature and high pressure. *Proc. 47th Italian Crystallographic Association Annual Meeting. Perugia, 26-29 June 2017.* (P)
- D. Comboni, G.D. Gatta, M. Merlini, **P. Lotti**, M. Hanfland (2017) Natural nano-sponge: New insights on the hydration of the zeolite laumontite. *Proc. 47th Italian Crystallographic Association Annual Meeting. Perugia, 26-29 June 2017.*
- **P. Lotti**, G.D. Gatta (2017) Compression of zeolites in “penetrating” fluids: an overview. *Proc. 7th Slovenian-Serbian-Croatian Symposium on Zeolites. Ljubljana, Slovenia, 25-27 May 2017.* (oral)

presentation)

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