

## **Curriculum vitae - Gennaro Ventruti**

### ***PERSONAL INFORMATION***

Place and Date of Birth: Taranto (Italy) on January 16th, 1965  
Nationality: Italian  
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### ***EDUCATION AND TRAINING***

1994 Degree in Physics with full marks (110/110 cum laude) at University of Bari  
1994 Graduate fellow position in Bari on the topic "*Optical properties and electron-phonon interaction in II-VI semiconductor nanocrystals*"  
1997 Two-years-Researcher position at INFM (Istituto Nazionale per la Fisica della Materia) on the topic "*Development of laser spectroscopic technique and optoelectronic devices*"  
2000 Doctoral position at Department of Earth and Geo-environmental Sciences, University of Bari, on the topic "*Crystal chemistry of minerals*"

### ***CURRENT POSITION***

2002 – pres. Permanent researcher position at Department of Earth and Geo-environmental Sciences (University of Bari)

### ***RESEARCH TOPICS***

The research activity mainly are related to:

- structure analysis from single crystal and powder data;
- in situ structural analysis of hydrated minerals upon heating, using single crystal or time-resolved powder diffraction with the Rietveld method;
- crystallography of layered phase (OD structures and polytypes);
- characterization by means of vibrational spectroscopy.

### ***TEACHING ACTIVITIES***

2002 – pres: Direct Supervisor and co-supervisor of several bachelor theses for Natural Sciences and Material Sciences students  
2002 – pres: Direct Supervisor of Ph.D. Thesis in Earth Sciences  
2005 – pres. Degree course of Techniques in Mineralogy and Petrology in Natural Sciences  
2011 – 2012 Degree course of Diffraction for nonmaterial in Material Sciences  
2010 –2016 Participation to the Teaching Staff Body for the doctorate in Earth Science

### ***OTHER SCIENTIFIC ACTIVITIES***

2002– pres. Referee for peer-reviewed journals including American Mineralogist, European Journal of Mineralogy, Mineralogical Magazine; Journal of Thermal analysis and calorimetry  
2011– pres. Member of scientific societies: Società Italiana di Mineralogia e Petrologia (SIMP), Associazione Italiana di Cristallografia (AIC)

### **LECTURES AND PRESENTATIONS UPON INVITATION**

20-23.09.2009 Keynote: “*HT x-ray diffraction and spectroscopy study of sideronatrite and its relationships with some analogues*” at the 38th CONGRESSO AIC, Salerno  
07-12.09.2008 Oral presentation: “*OD character and structural features of sideronatrite,  $Na_2Fe(SO_4)_2(OH) \cdot 3H_2O$* ” at the 1st SIMP-AIC JOINT MEETING, Sestri Levante  
04-08.09.2013 Lesson “*Vibrational properties and thermodynamics*” at the International SIMP-AIC Joint School “Crystallography Beyond Diffraction”, Camerino

### **PARTECIPATION TO ASSESSMENT COMMISSIONS**

2008 Member of a comparative assessment commission for an assistant professor position (Geo/06) at University of RomaTre

### **RESEARCH MANAGEMENT AND OTHER SCIENTIFIC ACTIVITIES**

2002 – 2004 Participation to MIUR research project (PRIN 2002): “*Proprietà cristallografiche e cristallografiche delle miche triottaedriche: implicazioni petrogenetiche*” (Coordinator: A. Mottana)  
2004 – 2006 Participation to research project (PRIN 2004): “*Miche in condizioni estreme: il ruolo della cristallografia nelle applicazioni petrologiche*” (Coordinator: M.F. Brigatti)  
2006 – 2008 Participation to research project (PRIN 2006): “*Relazioni tra ordinamenti cationici e tra ordinamenti cationici e popolazione anionica: implicazioni petrogenetiche*” (Coordinator: M.F. Brigatti)  
2008 – 2010 Participation to research project (PRIN 2008): “*Miche di interesse petrologico: struttura e caratteristiche chimico-fisiche in ambienti naturali e simulati*” (Coordinator: M.F. Brigatti)  
2010 – 2014 Participation to research project (PRIN 2010-2011) “*Dalle materie prime del sistema Terra alle applicazioni tecnologiche: studi cristallografici e strutturali*” (Coordinator: M.F. Brigatti)  
2010 Proposer of the following experiment at Elettra Synchrotron (Proposal n. 20100167 from 17/9/2010 to 20/9/2010): “*Dehydration dynamics of sideronatrite  $Na_2Fe(SO_4)_2(OH) \cdot 3H_2O$  by in situ synchrotron powder diffraction*”  
2011 Proposer of the following experiment at Elettra Synchrotron (Proposal n. 20110190 from 29/11/2011 to 3/12/2011): “*An investigation on the thermal decomposition products of sideronatrite*”  
2011 Proposer of the following experiment at Elettra Synchrotron (Proposal n. 20105403 from 15/4/2011 to 19/4/2011): “*Local geometry and octahedral site distortion around  $Fe^{3+}$  and  $Ti^{4+}$  in trioctahedral micas*”

- 2014 Proposer of the following experiment at Elettra Synchrotron (Proposal n. 20140392 from 17/9/2014 to 19/9/2014): *Synchrotron X-ray powder diffraction study of crystal structure of cyanotrichite*
- 2015 Proposer of the following experiment at Elettra Synchrotron (Proposal n. 20150331 from 3/8/2015 to 6/8/2015): *Thermal behavior of FeOH<sub>2</sub>SO<sub>4</sub>(2H<sub>2</sub>O) compounds by in situ synchrotron powder diffraction*

### **SELECTED PUBLICATIONS (2016-2012)**

- Maiorano P., Bertini A., Capolongo D., Eramo G., Gallicchio S., Girone A., Pinto D., Toti F., **Ventrucci G.**, Marino M. (2016). Climate signatures through Marine Isotope Stage 19 in the Montalbano Jonico section (Southern Italy): A land–sea perspective. *Palaeogeography Palaeoclimatology Palaeoecology*, vol. 461, p. 341-361, ISSN: 0031-0182, doi: 10.1016/j.palaeo.2016.08.029
- Schingaro Emanuela, Lacalamita Maria, Mesto Ernesto, **Ventrucci Gennaro**, Pedrazzi Giuseppe, Ottolini Luisa, Scordari Fernando (2016). Crystal chemistry and light elements analysis of Ti-rich garnets. *American Mineralogist*, vol. 101, p. 371-384, ISSN: 0003-004X, doi: <http://dx.doi.org/10.2138/am-2015-5439>
- **Ventrucci Gennaro**, Della Ventura Giancarlo, Bellatreccia Fabio, Lacalamita Maria, Schingaro Emanuela (2016). Hydrogen bond system and vibrational spectroscopy of the iron sulfate fibroferrite, Fe(OH)SO<sub>4</sub>·5H<sub>2</sub>O. *European Journal of Mineralogy*, vol. 28, p. 943-952, ISSN: 1617-4011, doi: 10.1127/ejm/2016/0028-2571
- **Ventrucci Gennaro**, Della Ventura Giancarlo, Corriero Nicola, Malferrari Daniele, Gualtieri Alessandro F., Susta Umberto, Lacalamita Maria, Schingaro Emanuela (2016). In situ high-temperature X-ray diffraction and spectroscopic study of fibroferrite, Fe(OH)SO<sub>4</sub>·5H<sub>2</sub>O. *Physics and Chemistry of Minerals*, vol. 43, p. 587-595, ISSN: 0342-1791, doi: 10.1007/s00269-016-0819-4
- **Ventrucci Gennaro**, Schingaro Emanuela, Monno Alessandro, Lacalamita Maria, Della Ventura Giancarlo, Bellatreccia Fabio, Cuocci Corrado, Rossi Manuela, Capitelli Francesco (2016). Structure refinement and vibrational spectroscopy of vauxite from the type locality, Llallagua (Bolivia). *Canadian Mineralogist*, vol. 54, p. 163-176, ISSN: 0008-4476, doi: 10.3749/canmin.150060
- **Ventrucci Gennaro**, Mugnaioli Enrico, Capitani Giancarlo, Scordari Ferdinando, Pinto Daniela, Lausi Andrea (2015). A structural study of cyanotrichite from Dachang by conventional and automated electron diffraction. *Physics and Chemistry of Minerals*, vol. 42, p. 651-661, ISSN: 0342-1791, doi: 10.1007/s00269-015-0751-z
- **Ventrucci Gennaro**, Scordari Fernando, Bellatreccia Fabio, Della Ventura Giancarlo, Sodo Armida (2015). Calcium tartrate esahydrate, CaC<sub>4</sub>H<sub>4</sub>O<sub>6</sub>·6H<sub>2</sub>O: A structural and spectroscopic study. *Acta Crystallographica. Section B, Structural Science, Crystal*

- **Ventruți G**, Della Ventura G., Scordari F., Susta U., Gualtieri A.F. (2015). In situ high-temperature XRD and FTIR investigation of hohmannite, a water-rich Fe-sulfate, and its decomposition products. *Journal of Thermal Analysis and Calorimetry*, vol. 119, p. 1793-1802, ISSN: 1388-6150, doi: 10.1007/s10973-014-4305-2
- **Ventruți G.**, Della Ventura G., Orlando R., Scordari F. (2015). Structure refinement, hydrogen-bond system and vibrational spectroscopy of hohmannite,  $\text{Fe}_2[\text{O}(\text{SO}_4)_2] \cdot 8\text{H}_2\text{O}$ . *Mineralogical Magazine*, vol. 79, p. 11-24, ISSN: 0026-461X, doi: 10.1180/minmag.2015.079.1.02
- Della Ventura G, **Ventruți G**, Bellatreccia F, Scordari F, Cestelli Guidi M (2013). FTIR transmission spectroscopy of sideronatrite, a sodium-iron hydrous sulphate. *Mineralogical Magazine*, vol. 77, p. 499-507, ISSN: 0026-461X, doi: 10.1180/minmag.2013.077.4.09
- Scordari F, Schingaro E, **Ventruți G**, Nicotra E, Viccaro M, Mazziotti Tagliani S (2013). Fluorophlogopite from Piano delle Concazze (Mt. Etna, Italy): crystal chemistry and implications for the crystallization conditions. *American Mineralogist*, vol. 98, p. 1017-1025, ISSN: 0003-004X, doi: 10.2138/am.2013.4225
- Di Leo P, Pizzigallo M, Valeria Ancona, Di Benedetto F, Mesto E, Schingaro E, **Ventruți G** (2013). Mechanochemical degradation of pentachlorophenol onto birnessite. *Journal of Hazardous Materials*, vol. 244-245, p. 303-310, ISSN: 0304-3894, doi: 10.1016/j.hazmat.2012.11.037
- **Ventruți G**, Fernando Scordari, Giancarlo Della Ventura, Fabio Bellatreccia, Alessandro F. Gualtieri, Andrea Lausi (2013). The thermal stability of sideronatrite and its decomposition products in the system  $\text{Na}_2\text{O}-\text{Fe}_2\text{O}_3-\text{SO}_2-\text{H}_2\text{O}$ . *Physics and Chemistry of Minerals*, vol. 40, p. 659-670, ISSN: 0342-1791, doi: 10.1007/s00269-013-0601-9
- M.A.Gomez, **Ventruți G**, M.Celikin, H.Assaaoudi, H.Putz, L.Becze, K.E.Lee, G.P.Demopoulos (2013). The nature of synthetic basic ferric arsenate sulfate  $(\text{Fe}(\text{AsO}_4)_{1-x}(\text{SO}_4)_x(\text{OH})_x)$  and basic ferric sulfate  $(\text{FeOHSO}_4)$ : their crystallographic, molecular and electronic structure with applications in the environment and energy. *RSC Advances*, vol. 37, p. 16840-16849, ISSN: 2046-2069, doi: 10.1039/C3RA42235F
- Di Leo P, Pizzigallo M, Valeria Ancona, Di Benedetto F, Mesto E, Schingaro E, **Ventruți G** (2012). Mechanochemical transformation of an organic ligand on mineral surfaces: The efficiency of birnessite in catechol degradation. *Journal of Hazardous Materials*, vol. 201-202, p. 148-154, ISSN: 0304-3894, doi: 10.1016/j.jhazmat.2011.11.054

- **Ventruți G**, Stasi Francesca, Pinto Daniela, Vurro Filippo, Renna Monica (2012). The plumose Boulangerite from Bottino, Apuan Alps, Italy: Crystal Structure, OD Character and Twinning. *Canadian Mineralogist*, vol. 50, p. 181-199, ISSN: 0008-4476