europass

Federico Galdenzi

WORK EXPERIENCE

14/04/2021 – CURRENT Ajdovscina, Nova Gorica, Slovenia

POSTDOC RESEARCHER UNIVERSITY OF NOVA GORICA

I started working in the University of Nova Gorica, at the LKO laboratory, as a post-doc researcher. My duties are:

- Mantaining the Laser beamline in the laboratory, operating on the optics and the other elements.
- Performing experiments using the ARPES techinque.
- Analysing and interpreting the data obtained.
- Mantain the High Vacuum experimental chambers.
- Teaching activities.

Thanks to the experience matured at the LKO, I've started my own research on the topic of Charge Density Waves in tritellurides under the supervision of prof.dr. Ressel Barbara, peforming experiments using the ARPES techinque to study the electronic states of the samples both in static experiments and in pump-probe experiments.
In the meantime, I was tasked to teaching duties for the Optic and Electrodynamic courses at the University of Nova gorica, and collaborated with dr. Marcello Coreno at the Italian Synctrotrhon of Elettra.

01/11/2017 – 27/02/2021 Roma, Italy

PH.D. STUDENT UNIVERSITY OF ROMA TRE

I've obtained my Ph.D. in Geophysics under the supervision of prof.dr. Giancarlo Della Ventura and dr. Augusto Marcelli. I've pursued the study of the Iron Oxidation and Dehydrogenation in natural and synthetic minerals with techinques such as Raman Spectroscopy, FT-IR spectroscopy, X-ray Absorption Spectroscopy, Mossbauer spectroscopy and X-ray Diffraction. I've develeped a model based on the preedge portion of the XAS spectra to predict with accuracty the relative percentage of iron ions in mineral samples. At the same time, I was tutor of one master degree student in Geology and one Ph.D. student in Geophysics. I've also collaborated with dr. Javad Rezvani in the study of Silicon Nanowires using Raman spectroscopy.

ADDITIONAL INFORMATION

PUBLICATIONS

Peer-reviewed Publications

1. G. Della Ventura, G. J. Redhammer, F. Galdenzi, G. Ventruti, U. Susta, R. Oberti, F. Radica, A. Marcelli; (2023) Oxidation or cation re-arrangement? Distinct behavior of riebeckite at high temperature. *American Mineralogist* ; 108 (1): 59–69. doi: https://doi.org/10.2138/am-2022-8073
2. A. Ciavardini, F. Galdenzi, M. Coreno, G. De Ninno, C. Grazioli, M. de Simone, R. Totani, S. Piccirillo, O. Plekan, A. Ponzi (2023) Valence and core-level X-ray photoemission spectroscopy of light-sensitive molecules: Lumazine and alloxazine, Chemical Physics, Volume 565
3. R.H. Menk,F. Arfelli,M.Cautero, G.Cautero, M. Di Fraia, M. Coreno, F.Galdenzi, W. Tutsch (2022) On the possibility to utilize a PCO Edge 4.2 bi scientificCMOS imager for extended ultra violet and soft Xrayphoton detection. (Journ. of Instr. Vol. 17)
4. Totani, R. Ljubić, I. Ciavardini, A. Grazioli, C. Galdenzi, F. de Simone, M. Coreno, (2021) M Frontier orbital stability of nitroxyl organic radicals probed by means of inner shell resonantly enhanced valence band photoelectron spectroscopy. Phys. Chem. Chem. Phys
5. Della Ventura, G., Radica, F., Galdenzi, F., Susta, U., Cinque, G., Cestelli-Guidi, M. Mihailova, B., Marcelli, A (2022) Kinetics of Dehydrogenation of Riebeckite Na Fe Fe Si O (OH) : An HT-FTIR study. Amer. Mineral. Vol 10, pag. 754-764
6. Milhaiova , G. Della Ventura, N. Waeselmann , W. Xu, J. Schlüter, F. Galdenzi, A. Marcelli, G. J. Redhammer, M. Boiocchi & R. Oberti . Atomistic insight into lithospheric conductivity revealed by phonon–electron excitations in hydrous ironbearing silicates. Commun Mater 2, 57 (2022).

7. J. Rezvani, L. D'ortenzi, F Galdenzi, L. Boarino, R. Gunnella, A. Di Cicco, A. Marcelli, N Pinto (2021) Structural Properties of Porous Silicon Nanowires: A Combined Characterization by Advanced Spectroscopic Techniques Synchrotron. Radiation Science and Applications.Vol 220. pp. 191-201
8. F. C. Manuella, G. Della Ventura, F. Galdenzi, S. Carbone (2019) Sr-rich aragonite veins in Hyblean serpentinized peridotite xenoliths (Sicily, Italy): Evidence for abyssal type carbonate metasomatism, Lithos, Vol. 326-327, 200-212
9. F. Galdenzi, G. Della Ventura, G. Cibin, S. Macis, A. Marcelli, (2018) Accurate Fe3+/Fe(tot) ratio from XAS spectra at the Fe K-edge, Radiation Physics and Chemistry 175
10. G. Della Ventura, F. Galdenzi, G. Cibin, R. Oberti, W. Xu, S. Macis, A. Marcelli, (2018)Iron oxidation dynamics vs. temperature of synthetic potassic-ferro-richterite: a XANES investigation, Phys. Chem. Chem.

ORAL PRESENTATIONS AND POSTERS

List

- IMA2022 - Fe-rich amphiboles: a very intriguing redox system
- QCM 2020 Oral session - Iron oxidation reversibility in amphiboles www.superstripes.net/conferences/qcm-2020-the-conference
- EGU 2020 Oral Session - Hydrogen diffusion in amphiboles https://meetingorganizer.copernicus.org/EGU2020/displays/35177
- SilS 2019 Oral session - X-ray studies on amphiboles www.unicam.it/sils2019/sils-2019-meeting
- SILS 2019 poster session - Engineering porous silicon nanowires with distinct electronicpropertie www.unicam.it/sils2019/sils-2019-meeting
- SILS 2018 poster session - Pre-edge studies on Fe-rictherite http://www.cristallografia.org/congresso2018/eng/detail.asp?idn=3104 10th Young Research Meeeting poster session - Mossbauer analysis on amphiboles http:// www.iphysnet.com/wp/yrm/events/10yrm/participants/

WORKSHOPS

List of Attended Worshops

- Advanced Infrared Microspectroscopy Analysis Training Quasar Software : Wednesday 14th - Thursday 15th April 2021 Location: Diamond Light Source, Harwell Campus, Oxfordshire (UK)
- X-ray Absorption Spectroscopy (XAS) Data Analysis Workshop 2020 Tuesday 10th to Thursday 12th March 2020 Diamond Light Source, Harwell Campus, Oxfordshire (UK)

HONOURS AND AWARDS

2019
Prom Programme – Jagiellonian University, Cracow Winner of the PROM programm in Poland with a project titled: Behaviour of amphiboles during heating treatment in vacuum conditions.The PROM programme is a financial support for foreign Ph.D. students organized by the Jagiellonian university in Krakow.

TEACHING

14/04/2022 – CURRENT
University of Nova Gorica

- Course of Electrodynamics, Optics and Physics Laboratories
- Oral Lessons, Demonstrations, Exercises, Rudimentary Lab. Experiments