Giuseppe Capobianco
PERSONAL INFORMATION

Giuseppe Capobianco

Date of Birth 22/02/1984
Research Fellow (art. 24 c.3-b L. 240/10) (SSD ING-IND/29)
Department of Chemical Engineering, Materials & Environment, Sapienza, Rome University, Via Eudossiana 18, 00184 Rome, Italy

Web site: http://dicma.ing.uniroma1.it/node/6112

ID_CODES

Scopus ID: 55884978800
https://orcid.org/0000-0003-1914-7275
Web of Science ResearcherID: J-4261-2019

SCIENTIFIC INDICATORS

Hirsch index (02/12/2023):

h-index = 15 (627 citations, 53 documents; Scopus)

FORMATION

2010: Graduated in Sciences for Cultural Heritage, Faculty of Mathematical and Physical Sciences, University of Parma
2012: 2nd professional master's programs in architectural restoration, Faculty of Architecture, University of Rome 3

2016: PhD in Engineering of materials, technologies and complex industrial systems - raw materials engineering curriculum, Sapienza, Rome University

ISTITUTIONAL ACTIVITIES

2022 Member of the teaching staff of the Didactic Area Council in Environmental and Industrial Engineering (Latina), Sapienza, Rome University

2022 Affiliation to the Interdepartmental Center for Research in Biophotonics, Sapienza, Rome University

TEACHING ACTIVITIES

2023 Course (A.Y. 2022-2023) for environmental engineering for sustainable development. Title: Advanced technologies for recycling materials

2023 Course (A.Y. 2022-2023) for environmental Engineering for sustainable development. Title: Laboratory of Hyperspectral Imaging

2018 Training seminar (A.Y. 2017-2018) for the PhD Course in Electrical, Materials and Nanotechnology Engineering. Title: "Hyperspectral image analysis for the characterization of primary and secondary raw materials" for the institution Sapienza, Rome University

2016-2021 seminar activities and exercises for the Course of Advanced Technologies for Materials Recycling for the institution Sapienza, Rome University "

2016-2021 seminar activities and exercises for the Materials Recovery and Recycling course for the institution: Sapienza, Rome University

Dr. Giuseppe Capobianco has obtained the Italian National Scientific Qualification for the role of associate Professor in the sector 08/A2, SSD ING-IND/29 (valid from 01/22/2021 to 01/22/2030)

RECENT RESEARCH INTERESTS

The research activity of Dr. Giuseppe Capobianco is mainly focused on primary and secondary raw material characterization and classification adopting different non-destructive and non-invasive analytical techniques and on the further processing of the acquired information adopting chemometric strategies. The characterization of primary and secondary raw materials is carried out by different classical and advanced analytical methods: Raman and NIR spectroscopy, hyperspectral imaging working in different wavelength ranges (VIS-NIR, NIR and SWIR wavelength fields), optical and electronic microscopy (SEM), micro X-ray fluorescence (micro-XRF).

Among the different raw materials, the most investigated include asbestos, wood, glass, construction & demolition waste, plastics from complex post-consumer waste, e-waste. Other research topics include the monitoring of phytoextraction processes (hyperaccumulating plants) as well as materials from cultural heritage.

RECENT FUNDED PROJECTS

2014-2015 "Sviluppo di procedure e tecniche innovative finalizzate alla caratterizzazione della fotodegradazione del legno" (*Development of innovative procedures and techniques aimed at characterizing the photodegradation of wood*). Projects funded by Sapienza, Rome University. Role: Scientific manager.

2011-2014 "Environment Collaborative Project n.265189, C2CA: "Advanced Technologies for the Production of Cement and Clean Aggregates from Construction and Demolition Waste". WP2: The ITZ in concrete with natural and recycled aggregates: Study of microstructures based on image and SEM analysis". Role: Collaborator.

2015 "Applicazione di metodologie di sensing basate su "hyperspectral imaging" per il controllo di qualità di aggregati riciclati da calcestruzzo giunto a fine vita" ("*Application of sensing methodologies based on "hyperspectral imaging" for the quality control of aggregates recycled from end-of-life concrete*"). Projects funded by Sapienza, Rome University. Role: Collaborator.

2017 "Riconoscimento e classificazione di fibre di amianto in manufatti ad uso civile e industriale in opera e dismessi" ("*Recognition and classification of asbestos fibers in civil and industrial artifacts in operation and disused*"). Projects funded by Sapienza, Rome University. Role: Collaborator.

2017-2019 "Riconoscimento e caratterizzazione di materiali contenenti amianto a scala di laboratorio mediante analisi d'immagine iper-spettrale e correlazione con le informazioni estraibili da telerilevamento di prossimità e remoto (aereo e satellitare) ("*Recognition and characterization of materials containing asbestos on a laboratory scale through hyper-spectral image analysis and correlation with information extracted from proximity and remote remote sensing (airborne and satellite)*"). Projects funded by The National Institute for Insurance against Accidents at Work (INAIL). Role: Collaborator.

2018 "Caratterizzazione orientata al riciclo di circuiti stampati provenienti da scarti di apparecchiature elettriche ed elettroniche mediante analisi in microfluorescenza a raggi X e analisi d'immagine iperspettrale" ("*Recycling-oriented characterization of printed circuit boards from electrical and electronic equipment waste by X-ray microfluorescence analysis and hyperspectral image analysis*"). Projects funded by Sapienza, Rome University. Role: Collaborator.

2018-2019 "Tecnologie di analisi, diagnostica, monitoraggio per la conservazione e il restauro dei beni culturali" ("*Technologies of analysis, diagnostics, monitoring for the conservation and restoration of cultural heritage*"). Projects funded by Lazio Region, Italy. Role: Collaborator.

2019 "Applicazione di tecniche di hyperspectral imaging in campo agro-alimentare per il controllo di qualità dei prodotti" ("*Application of hyperspectral imaging techniques in the agro-food field for product quality control*"). Projects funded by Sapienza, Rome University. Role: Collaborator.

2019-2020 FernArsenicSoliTechnology (FAST) 'Una tecnologia innovativa che ottimizza l'uso delle felci per la detossificazione di suoli contaminati da arsenico' ("*An innovative technology that optimizes the use of ferns for the detoxification of soils contaminated by arsenic*"). Projects funded by Lazio Region, Italy. Role: Collaborator.

2021-2022 "DWARF: La felce Pteris vittata: una strategia green per eliminare l'arsenico dalle acque potabili" ("*The Pteris vittata fern: a green strategy to eliminate arsenic from drinking water*") . Projects funded by Lazio Region, Italy. Role: Collaborator.

2021-2022 "ARTEMISIA (ARTificial intelligence Extended-Multispectral Imaging Scanner for In-situ Artwork analysis)". Projects funded by Lazio Region, Italy. Role: Collaborator.

2021-2022 "Sviluppo e applicazione in situ di tecnologie innovative per la Conservazione di Lapidei mediante Nanotecnologie e oli Essenziali in chiese storiche medievali e sistemi integrati per la digitalizzazione e il monitoraggio dei manufatti" ("*Development and application in situ of innovative technologies for the storage of gravestones and through nanotechnologies and essential oils in medieval historic churches and integrated systems for the digitization and monitoring of artefacts*"). Projects funded by Lazio Region, Italy. Role: Collaborator.

2022-2023 Assisted phytoremediation of Perfluorinated Alkyl Substances with industrial hemp: physiological and molecular analyses combined with innovative non-invasive analytical methods. PRIN 2022 (research projects of relevant national interest).

2022-2025 New technologies and methodologies for the traceability of agri-food supply chains. Agritech - National Research Centre for Agricultural Technologies. National Recovery and Resilience Plan (PNRR)

2022-2025 Integrated assessment, detection, prevention and mitigation of risk in different environmental compartments - RETURN (multi-Risk sciEnce for resilienT commUnities undeR a changiNg climate). National Recovery and Resilience Plan (PNRR)

Dr. Giuseppe Capobianco is the guest editor of the special issue Water and Soil Pollution Restoration Multidisciplinary Digital Publishing Institute (MDPI) https://www.mdpi.com/journal/water/special_issues/pollution_restoration

LIST OF PUBLICATIONS

Articles indexed in international journals WoS and/or SCOPUS

1. Capobianco, G., Pronti, L., Gorga, E., Romani, M., Cestelli-Guidi, M., Serranti, S., & Bonifazi, G. (2024). Methodological approach for the automatic discrimination of pictorial materials using fused hyperspectral imaging data from the visible to mid-infrared range coupled with machine learning methods. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 304, 123412.
2. Bonifazi, G., Capobianco, G., Serranti, S., Trotta, O., Bellagamba, S., Malinconico, S., & Paglietti, F. (2024). Asbestos detection in construction and demolition waste by different classification methods applied to short-wave infrared hyperspectral images. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 123672.
3. Cucuzza, P., Serranti, S., Capobianco, G., & Bonifazi, G. (2023). Multi-level color classification of post-consumer plastic packaging flakes by hyperspectral imaging for optimizing the recycling process. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 302, 123157.
4. Bonifazi, G., Capobianco, G., & Serranti, S. (2023). Fast and effective classification of plastic waste by pushbroom hyperspectral sensor coupled with hierarchical modelling and variable selection. Resources, Conservation and Recycling, 197, 107068.
5. Bonifazi, G., Capobianco, G., Cucuzza, P., Serranti, S., & Spizzichino, V. (2023). Black Plastic Waste Classification by Laser-Induced Fluorescence Technique Combined with Machine Learning Approaches. Waste and Biomass Valorization, 1-12.
6. Capobianco, G., Antenozio, M. L., Bonifazi, G., Brunetti, P., Cardarelli, M., Cestelli Guidi, M., ... & Serranti, S. (2023). Multi-Analytical Approach to Evaluate Elements and Chemical Alterations in Pteris vittata Plants Exposed to Arsenic. Water, 15(7), 1333.
7. Antenozio, M. L., Capobianco, G., Costantino, P., Vamerali, T., Bonifazi, G., Serranti, S., Brunetti, P., & Cardarelli, M. (2022). Arsenic accumulation in Pteris vittata: Time course, distribution, and arsenic-related gene expression in fronds and whole plantlets. Environmental Pollution, 309, 119773.
8. Bonifazi, G., Capobianco, G., Cucuzza, P., Serranti, S., & Uzzo, A. (2022). Recycling-oriented characterization of pet waste stream by SWIR hyperspectral imaging and variable selection methods. Detritus, 18, 42-49.
9. Capobianco, G., Bonifazi, G., Serranti, S., Marabottini, R., Antenozio, M. L., Cardarelli, M., Brunetti, P., & Stazi, S. R. (2022). A Green Approach Based on Micro-X-ray Fluorescence for Arsenic, Micro-and Macronutrients Detection in Pteris vittata. Water, 14(14), 2202.
10. Trotta, O., Bonifazi, G., Capobianco, G., & Serranti, S. (2021). Recycling-Oriented Characterization of Post-Earthquake Building Waste by Different Sensing Techniques. Journal of Imaging, 7(9), 182.
11. Cucuzza, P., Serranti, S., Bonifazi, G., & Capobianco, G. (2021). Effective Recycling Solutions for the Production of High-Quality PET Flakes Based on Hyperspectral Imaging and Variable Selection. Journal of Imaging, 7(9), 181.
12. Bonifazi, G., Capobianco, G., Gasbarrone, R., Serranti, S., Contaminant detection in pistachio nuts by different classification methods applied to short-wave infrared hyperspectral images,2021, Food Control,130,108202, 10.1016/j.foodcont.2021.108202
13. Antenozio, M.L., Giannelli, G., Marabottini, R., Brunetti, P., Allevato, E., Marzi, D., Capobianco, G., Bonifazi, G., Serranti, S., Visioli, G., Stazi, S.R., Cardarelli, M., Phytoextraction efficiency of Pteris vittata grown on a naturally As-rich soil and characterization of As-resistant rhizosphere bacteria,2021, Scientific Reports,11,1, 6794,2,10.1038/s41598-021-86076-7
14. Bonifazi G., Gasbarrone R., Capobianco G., Serranti S., A dataset of visible – Short wave InfraRed reflectance spectra collected on pre-cooked pasta products, 2021, Data in Brief , 106989, 10.1016/j.dib.2021.106989
15. Capobianco, G., Agresti, G., Bonifazi, G., Serranti, S., Pelosi, C.,Yellow pigment powders based on lead and antimony: Particle size and colour hue,2021,Journal of Imaging,7,8,127,10.3390/jimaging7080127
16. Pronti, L., Capobianco, G., Vendittelli, M., Felici, A.C., Serranti, S., Bonifazi, G., Optimized method for mapping inorganic pigments by means of multispectral imaging combined with hyperspectral spectroscopy for the study of Vincenzo Pasqualoni's wall painting at the basilica of S. Nicola in Carcere in rome,2021, Minerals,11,8,839,1,10.3390/min11080839
17. Pelosi, C., Rubino, G., Capobianco, G., Lanteri, L., Agresti, G., Bonifazi, G., Serranti, S., Picchio, R., Lo Monaco, A., A multi-technique approach to evaluate the surface properties of heat-treated chestnut wood finished with a water-based coating, 2021, Coatings,11,6,706, 10.3390/coatings11060706
18. Bonifazi, G., Capobianco, G., Palmieri, R., Serranti, S., Evaluation of elements distribution in printed circuit boards from mobile phones by micro x-ray fluorescence,2021, Detritus,14,78,85, 10.31025/2611-4135/2021.14067
19. Serranti, S., Capobianco, G., Malinconico, S., Bonifazi, G., Micro X-ray fluorescence imaging coupled with chemometrics to detect and classify asbestos fibers in demolition waste,2020, Detritus, 12,150,159, 10.31025/2611-4135/2020.14007
20. Agresti, G., Bonifazi, G., Capobianco, G., Lanteri, L., Pelosi, C., Serranti, S., Veneri, A., Hyperspectral imaging as powerful technique for evaluating the stability of Tattoo Wall®,2020, Microchemical Journal,157,104866,7, 10.1016/j.microc.2020.104866
21. Romani, M., Capobianco, G., Pronti, L., Colao, F., Seccaroni, C., Puiu, A., Felici, A.C., Verona-Rinati, G., Cestelli-Guidi, M., Tognacci, A., Vendittelli, M., Mangano, M., Acconci, A., Bonifazi, G., Serranti, S., Marinelli, M., Fantoni, R., Analytical chemistry approach in cultural heritage: the case of Vincenzo Pasqualoni's wall paintings in S. Nicola in Carcere (Rome),2020, Microchemical Journal,156,104920,5, 10.1016/j.microc.2020.104920
22. Capobianco, G., Sferragatta, A., Lanteri, L., Agresti, G., Bonifazi, G., Serranti, S., Pelosi, C.,µXRF mapping as a powerful technique for investigating metal objects from the archaeological site of ferento (Central Italy),2020,Journal of Imaging,6,7,59,2,10.3390/jimaging6070059
23. Bonifazi, G., Capobianco, G., Serranti, S., Hyperspectral imaging and hierarchical PLS-DA applied to asbestos recognition in construction and demolition waste,2019, Applied Sciences (Switzerland),9,21,4587,4,10.3390/app9214587
24. Bonifazi, G., Capobianco, G., Palmieri, R., Serranti, S., Hyperspectral imaging applied to the waste recycling sector,2019, Spectroscopy Europe,31,2,8,11,6
25. Bonifazi, G., Capobianco, G., Pelosi, C., Serranti, S., Hyperspectral imaging as powerful technique for investigating the stability of painting samples,2019, Journal of Imaging,5,1,8,18,10.3390/jimaging5010008
26. Capobianco, G., Brunetti, P., Bonifazi, G., Costantino, P., Cardarelli, M., Serranti, S., The use of micro-energy dispersive X-ray fluorescence spectrometry (µ-XRF) combined with a multivariate approach to determine element variation and

distribution in tobacco seedlings exposed to arsenate,2018, Spectrochimica Acta - Part B Atomic Spectroscopy,147,132,140,9, 10.1016/j.sab.2018.05.029

27. Pelosi, C., Capobianco, G., Agresti, G., Bonifazi, G., Morresi, F., Rossi, S., Santamaria, U., Serranti, S., A methodological approach to study the stability of selected watercolours for painting reintegration, through reflectance spectrophotometry, Fourier transform infrared spectroscopy and hyperspectral imaging, 2018, Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy,198,92,106,16, 10.1016/j.saa.2018.03.008

28. Bonifazi, G., Capobianco, G., Serranti, S., A hierarchical classification approach for recognition of low-density (LDPE) and high-density polyethylene (HDPE) in mixed plastic waste based on short-wave infrared (SWIR) hyperspectral imaging, 2018, Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 198,115,122,25, 10.1016/j.saa.2018.03.006

29. Serranti, S., Capobianco, G., Bonifazi, G., Integrated micro x-ray fluorescence and chemometric analysis for printed circuit boards recycling,2018, Detritus,1, March,38,47,1,10.26403/detritus/2018.4

30. Bonifazi, G., Capobianco, G., Serranti, S., Asbestos containing materials detection and classification by the use of hyperspectral imaging, 2018, Journal of Hazardous Materials,344,981,993,17, 10.1016/j.jhazmat.2017.11.056

31. Capobianco, G., Pelosi, C., Agresti, G., Bonifazi, G., Santamaria, U., Serranti, S., X-ray fluorescence investigation on yellow pigments based on lead, tin and antimony through the comparison between laboratory and portable instruments,2018, Journal of Cultural Heritage,29,19,29,15, 10.1016/j.culher.2017.09.002

32. Bonifazi, G., Calienno, L., Capobianco, G., Monaco, A.L., Pelosi, C., Picchio, R., Serranti, S., A new approach for the modelling of chestnut wood photo-degradation monitored by different spectroscopic techniques, 2017, Environmental Science and Pollution Research,24,16,13874,13884,17, 10.1007/s11356-016-6047-0

33. Capobianco, G., Bracciale, M.P., Sali, D., Sbardella, F., Belloni, P., Bonifazi, G., Serranti, S., Santarelli, M.L., Cestelli Guidi, M., Chemometrics approach to FT-IR hyperspectral imaging analysis of degradation products in artwork cross-section, 2017, Microchemical Journal,132,69,76,25, 10.1016/j.microc.2017.01.007

34. Capobianco, G., Calienno, L., Pelosi, C., Scacchi, M., Bonifazi, G., Agresti, G., Picchio, R., Santamaria, U., Serranti, S., Monaco, A.L., Protective behaviour monitoring on wood photo-degradation by spectroscopic techniques coupled with chemometrics,2017, Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy,172,34,42,21,10.1016/j.saa.2016.05.050

35. Bonifazi, G., Serranti, S., Capobianco, G., Agresti, G., Calienno, L., Picchio, R., Lo Monaco, A., Santamaria, U., Pelosi, C., Hyperspectral imaging as a technique for investigating the effect of consolidating materials on wood, 2017, Journal of Electronic Imaging,26,1,011003,10, 10.1117/1.JEI.26.1.011003

36. Bonifazi, G., Calienno, L., Capobianco, G., Lo Monaco, A., Pelosi, C., Picchio, R., Serranti, S., Modeling color and chemical changes on normal and red heart beech wood by reflectance spectrophotometry, Fourier Transform Infrared spectroscopy and hyperspectral imaging, 2015, Polymer Degradation and Stability,113,10,21,30,10.1016/j.polymdegradstab.2015.01.001

37. Agresti, G., Bonifazi, G., Calienno, L., Capobianco, G., Lo Monaco, A., Pelosi, C., Picchio, R., Serranti, S., Surface investigation of photo-degraded wood by colour monitoring, infrared spectroscopy and hyperspectral imaging,2013, Journal of Spectroscopy,1,1,380536,61,10.1155/2013/380536

38. Agresti, G., Bonifazi, G., Calienno, L., Capobianco, G., Lo Monaco, A., Pelosi, C., Picchio, R., Serranti, S., Colour modifications and hyperspectral imaging: Non-invasive analysis of photo-degraded wood surfaces, 2013, Journal of Agricultural Engineering,44,e5,19,25,7,10.4081/jae.2013.(s1):e5

Articles in international congress proceedings indexed to ISI and / or SCOPUS

1. Bonifazi, G., Capobianco, G., Cucuzza, P., & Serranti, S. (2023, May). Hyperspectral imaging coupled with data fusion for plastic packaging waste recycling. In SPIE Future Sensing Technologies 2023 (Vol. 12327, pp. 110-122). SPIE.
2. Bonifazi, G., Capobianco, G., Palmieri, R., Serranti, S., Antenozio, M. L., Brunetti, P., & Cardarelli, M. (2023, March). On-site spectroscopy as a tool for monitoring phytoremediation by ferns of arsenic contaminated water. In *Photonic Instrumentation Engineering X* (Vol. 12428, pp. 283-290). SPIE.
3. Bonifazi, G., Capobianco, G., Serranti, S., & Trotta, O. (2023, March). An innovative approach based on hyperspectral imaging for an automatic characterization of post-earthquake building waste. In *Photonic Instrumentation Engineering X* (Vol. 12428, pp. 291-297). SPIE.
4. Bonifazi, G., Capobianco, G., Gasbarrone, R., Serranti, S., Bellagamba, S., & Taddei, D. (2022, April). Data Fusion of PRISMA Satellite Imagery for Asbestos-containing Materials: An Application on Balangero's Mine Site (Italy). In IMPROVE (pp. 150-157).
5. Lorenzo-Navarro, J., Serranti, S., Bonifazi, G., & Capobianco, G. (2021, June). Performance Evaluation of Classical Classifiers and Deep Learning Approaches for Polymers Classification Based on Hyperspectral Images. In International Work-Conference on Artificial Neural Networks (pp. 281-292). Springer, Cham.
6. Bonifazi, G., Capobianco, G., Gasbarrone, R., & Serranti, S. (2021, June). Cold Chain Maintenance Evaluation of Pre-Cooked Pasta by Visible and Short-Wave InfraRed Spectroscopy. In 2021 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-6). IEEE.
7. Bonifazi, G., Capobianco, G., Gasbarrone, R., Serranti, S., Hazelnuts classification by hyperspectral imaging coupled with variable selection methods, 2021, Proceedings of SPIE - The International Society for Optical Engineering, 11754, 117540Q, 10.1117/12.2588287
8. Bonifazi, G., Capobianco, G., Serranti, S., Calvini, R., Image data fusion applied to pictorial layers recognition, 2020, Proceedings of 2020 Italian Conference on Optics and Photonics, ICOP 2020, 9300343, 10.1109/ICOP49690.2020.9300343
9. Pelosi, C., Lanteri, L., Agresti, G., Rubino, G., Persia, F., Bonifazi, G., Serranti, S., Capobianco, G., Experimental tests for evaluating the stability of a new nano-silica based protective for Sperone stone in comparison to traditional products, 2020, AIP Conference Proceedings,2257, 020012, 10.1063/5.0023721
10. Bonifazi, G., Capobianco, G., Serranti, S., Antenozio, M.L., Brunetti, P., Cardarelli, M., An innovative approach based on hyperspectral imaging (HSI) combined with chemometrics for soil phytoremediation monitoring, 2020, Proceedings of SPIE - The International Society for Optical Engineering, 11287, 112871B,1, 10.1117/12.2543539

11. Agresti, G., Bonifazi, G., Capobianco, G., Lanteri, L., Pelosi, C., Serranti, S., Veneri, A., Tattoo Wall®: Study of the stability of an innovative decorative technique through hyperspectral imaging and possible application in the mural painting's restoration, 2019, Proceedings of SPIE - The International Society for Optical Engineering, 11058,110581G, 4,10.1117/12.2525726

12. Serranti, S., Bonifazi, G., Capobianco, G., Malinconico, S., Paglietti, F., Hyperspectral imaging applied to asbestos containing materials detection: Specimen preparation and handling, 2019, Proceedings of SPIE - The International Society for Optical Engineering, 11007,110070S,2,10.1117/12.2517070

13. Bonifazi, G., Serranti, S., Capobianco, G., Agresti, G., Calienno, L., Picchio, R., Lo Monaco, A., Santamaria, U., Pelosi, C., Study of consolidating materials applied on wood by hyperspectral imaging, 2016, Proceedings of SPIE - The International Society for Optical Engineering, 9862, 98620I, 1, 10.1117/12.2223013

14. Bonifazi, G., Capobianco, G., Serranti, S., Hyperspectral imaging applied to the identification and classification of asbestos fibers, 2015, 2015 IEEE SENSORS – Proceedings,7370458 ,8, 10.1109/ICSENS.2015.7370458

15. Capobianco, G., Prestileo, F., Serranti, S., Bonifazi, G., Hyperspectral imaging-based approach for the in-situ characterization of ancient Roman wall paintings, 2015, Periodico di Mineralogia, 84,3A,407,418,17, 10.2451/2015PM0021

16. Capobianco, G., Bonifazi, G., Prestileo, F., Serranti, S., Pigment identification in pictorial layers by HyperSpectral Imaging, 2014, Proceedings of SPIE - The International Society for Optical Engineering, 9106, 91060B, 8,10.1117/12.2049941

17. Capobianco, G., Mecchi, A. M., Prestileo, F., & Gazzoli, D., 2013. A Scientific Approach in the Recovery of the Historic Center of Rome: Limits and Potentials of the "Color Plan". Procedia Chemistry, 8, 212-220.

Articles, abstract and proceedings of international congresses not indexed by ISI and / or SCOPUS

1. Malinconico, S., Capobianco, G., Bonifazi, G., Grunwald Romera, U., Bellagamba, S., Serranti, S., & Paglietti, F. (2023). Scanning electron microscopy and hyperspectral imaging in man made vitreous fibers characterization. In 5th International Caparica Conference on Pollutant Toxic Ions and Molecules 2023, 06th – 09th November 2023, Caparica, Portugal.

2. Bonifazi, G.; Serranti, S.; Capobianco, G.; Trotta, O., 2022. Hyperspectral imaging applied to the recognition of contaminants in post-earthquake building waste stream. 3rd Symposium on Short Wave Infrared Imaging and Spectroscopy (SwIImS). Roma, Italia, 14 September 2022.

3. Bonifazi, G.; Serranti, S.; Capobianco, G., Lonigro, I., Malinconico, S., Bellagamba, S.; 2022. Hyperspectral imaging applied to asbestos recognition in soils. 3rd Symposium on Short Wave Infrared Imaging and Spectroscopy (SwIImS). Roma, Italia, 14 September 2022.

4. Trotta, O.; Bonifazi, G.; Capobianco, G.; Serranti, S., 2022. Detection of asbestos in post-earthquake building waste through hyperspectral imaging and micro-X-ray fluorescence. Sixth symposium on circular economy and urban mining (SUM2022). Capri, Italia, 18-20 May 2022.

5. Bonifazi, G., Serranti, S., Capobianco, G., Cucuzza, P. (2022, September). Hyperspectral imaging analysis combined with hierarchical modeling and variables selection for plastic waste recognition by polymer and color. In Short wave infrared imaging and spectroscopy - SWIImS, Rome, 172. (Atto di convegno - Abstract).

6. Bonifazi, G.; Capobianco, G.; Serranti, S.; Trotta, O., 2022. Classification of post-earthquake building waste through Hyperspectral imaging approach. 9th International Conference on Sustainable Solid Waste Management (CORFU2022). Corfu, Greece, 15-18 June 2022.

7. Bonifazi, G.; Trotta, O.; Capobianco, G.; Serranti, S., 2022. Development of hyperspectral imaging classification model applied to the recognition and sorting of post-earthquake construction waste. 10th International Conference on Conveying and Handling of Particulate Solids (CHOPS2022). Salerno, Italia, 5-9 July 2022.

8. Bonifazi, G., Capobianco, G., Cucuzza, P., Serranti, S. (2022, June). Investigation on the use of laser-induced fluorescence for the recycling of black plastics. In 9th International Conference on Sustainable Solid Waste Management, Corfu, 1784. (Atto di convegno - Abstract).

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