Alessia Tombesi

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EDUCATION and TRAINING

October 2020- September 2021 **Postdoctoral fellow** University of Camerino
Scientific sector: CHIM/03 Chimica generale e inorganica
Research project: "Sviluppo di vetri e specchi antimpronta ed antibatterici"
Supervisor: Professor Fabio Marchetti
Partner company: Fiam Italia Srl Via Ancona, 1/B, 61010 San Germano PU

October 2019- October 2020 **Postdoctoral fellow** University of Camerino
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May 2019-September 2019 **Research grant** University of Camerino
Research project**:** "MOFs contenenti leganti ditopici N,N-donatori: sintesi, caratterizzazione e studi biologici"
Supervisor: Professor Riccardo Pettinari

February 2019 **Percorso formative per il conseguimento di 24CFU nelle discipline antropo-psico-pedagogiche e nelle metodologie e tecnologie didattiche** ai sensi del Decreto ministeriale 616 del 10/08/2018

February 2018- August 2019 **Visiting PhD student researcher at UCL** University College London
Supervisors: Professor Ivan Parkin

2015-2019 **PhD in Chemical Science Series XXXI Cycle** University of Camerino
PhD thesis title: "Advanced functional coating for self-cleaning and anti-corrosion applications" Supervisors: Professor Claudio Pettinari
EUREKA Project Partner company: DIASEN, n° 5, 60041 Zona Industriale Berbentina AN

2013- 2015 **Master degree in "Chemistry and advanced chemical methodologies** University of Camerino
Thesis title: "Synthesis, Characterization And In Vitro Studies Of The Antimalarial Potential Activity Of Water Soluble Cu(I), Ag(I) And Au(I) Phosphane Complexes" Supervisors: Prof. Maura Pellei, Prof. Annette Habluetzel
Co- Supervisor: Dr. Sofia Tapanelli

2009- 2013 **Bachelor in "Chemistry"** University of Camerino
Thesis title: " Synthesis and characterization of Biologically Active Cu (I) and Ag (I) Complexes with Water-soluble Phosphines and Bidentate Nitrogenous ligands" Supervisors: Prof. Maura Pellei, Prof. Carlo Santini
Co- Supervisor: Dr. Marika Marinelli

PUBLICATIONS

Tapanelli, S.;Habluetzel, A.;Pellei, M.;Marchiò, L.;Tombesi, A.;Capparè, A. & Santini, C. :Novel metalloantimalarials: Transmission blocking effects of water soluble Cu(I), Ag(I) and Au(I) phosphane complexes on the murine malaria parasite Plasmodium berghei. *J. Inorg. Biochem.* **166,** (2017).

Marchetti, F.;Pettinari, C.;Di Nicola, C.;Tombesi, A. & Pettinari, R. :Coordination chemistry of pyrazolone-based ligands and applications of their metal complexes. *Coord. Chem. Rev.* **401,** (2019).

Tombesi, A.;Li, S.;Sathasivam, S.;Page, K.;Heale, F. L.;Pettinari, C.;Carmalt, C. J. & Parkin, I. P. :Aerosol-assisted chemical vapour deposition of transparent superhydrophobic film by using mixed functional alkoxysilanes. *Sci. Rep.* **9,** (2019).

Vismara, R.;Tuci, G.;Tombesi, A.;Domasevitch, K. V.;Di Nicola, C.;Giambastiani, G.;Chierotti, M. R.;Bordignon, S.;Gobetto, R.;Pettinari, C.;Rossin, A. & Galli, S. :Tuning Carbon Dioxide Adsorption Affinity of Zinc(II) MOFs by Mixing Bis(pyrazolate) Ligands with N-Containing Tags. *ACS Appl. Mater. Interfaces* **11,** (2019).

Pettinari, C.;Tombesi, A.;Marchetti, F.;Di Nicola, C. & Pettinari, R. :Fifteen Years of Scientific Investigation into Main Groups and Transition Metal Coordination Chemistry with Allan White. *Aust. J. Chem.* **73,** (2020).

Balducci, F.;Adamopoulos, S.;Pettinari, C.;Canti, E.;Di Nicola, C.;Tombesi, A.;Cecchini, A. & Gabbani, C. :A formaldehyde-free adhesive for particleboards based on soy flour, magnesium oxide, and a plant-derived enzymatic hydrolysate. *BioResources* **15,** (2020).

Di Nicola, C.;Marchetti, F.;Pettinari, R.;Tombesi, A.;Pettinari, C.;Grappasonni, I.;Dyson, P. J. & Scuri, S. :Tethering (Arene)Ru(II) acylpyrazolones decorated with long aliphatic chains to polystyrene surfaces provides potent antibacterial plastics. *Materials (Basel).* **13,** (2020).

Di Nicola, C.;Tombesi, A.;Moroni, M.;Vismara, R.;Marchetti, F.;Pettinari, R.;Nardo, L.;Vesco, G.;Galli, S.;Casassa, S.;Pandolfo, L. & Pettinari, C.: Investigation on the interconversion from DMF-solvated to unsolvated copper(ii) pyrazolate coordination polymers. *CrystEngComm* **22,** (2020).

Pettinari, C. & Tombesi, A. :Metal–organic frameworks for chemical conversion of carbon dioxide. *MRS Energy Sustain.* **7,** E31 (2020).

Pettinari, C. & Tombesi, A. :Metal–organic frameworks for carbon dioxide capture. *MRS Energy Sustain.* **7,** E35 (2020).

Pettinari, R., Marchetti, F., Tombesi, A., Duan, F., Zhou, L., Messori, L., Giacomelli, C., Marchetti, L., Trincavelli, M. L., Marzo, T., La Mendola, D., Balducci, G., & Alessio, E.: Ruthenium(II) 1,4,7-trithiacyclononane complexes of curcumin and bisdemethoxycurcumin: Synthesis, characterization, and biological activity. Journal of Inorganic Biochemistry, **218**, 111387, (2021).

Pettinari, C., Pettinari, R., Di Nicola, C., Tombesi, A., Scuri, S., & Marchetti, F.: Antimicrobial MOFs. Coordination Chemistry Reviews, **446**, 214121,(2021).

CONFERENCES and COURSES ATTENDED

- **2nd International School on Porous materials:MOFschool 2021, 2**1-25 June 2021, Como Italy

Alessia Tombesi, Sonila Xhafa, Fabio Marchetti, Claudio Pettinari, Corrado Di Nicola, Riccardo Pettinari, Stefania Scuri "*Bis(pyrazolato)-based metal-organic frameworks of copper(ii) and zinc(ii) display antimicrobial activity",* Book of abstarct, pag.71, Como Italy

- **1th International School of Chemistry "Chemistry for everyday life",** 1-6 September 2019, Camerino Italy
- **12th International School of Organometallic Chemistry** (**ISOC 2019**), 31 Agust-4 September 2019, Camerino (Italy)
- **VI ISGS Summer School Frontier Hybrid Materials** 16-19 September 2018 , Alghero (Italy)
- **11thInternational School of Organometallic Chemistry** (**ISOC 2017**), 2–6 Septemebr 2017, San Benedetto del Tronto (Italy)

Alessia Tombesi, Nello Mosca, Rebecca Vismara, Andrea Rossin, Claudio Pettinari,Corrado Di Nicola,Simona Galli.*"Synthesis and characterization of novel coordination framework incorporating bis(pyrazolyl)-tagged ligands for a different applications.* (poster). 11thInternational School of Organometallic Chemistry (ISOC

2017), Abs. Atti del Conv., poster 70, pag.53, 2-6 Settembre 2017, San Benedetto del Tronto (Italia). ISBN: 9788867680290.
Nello Mosca, Rebecca Vismara, Alessia Tombesi, Giulia Tuci, Giuliano Giambastiani, Andrea Rossin, Claudio Pettinari, Simona Galli. "NO2-tagged pyrazolate based MOFs: efficient CO2sorbents at ambient conditions". (poster). 11thInternational School of Organometallic Chemistry (ISOC 2017), Abs. Atti del Conv., poster 46,pag.41, 2–6 Settembre 2017, San Benedetto del Tronto(Italia). ISBN: 9788867680290.

- **XXXV Congresso delle Sezioni Toscana-Umbria-Marche-Abruzzo della Società Chimica Italiana** - **TUMA2016**, 25-27 September 2016, Giulianova (TE) XLIII Congresso Nazionale della Divisione Chimica Inorganica della Società Chimica Italiana.

Alessia Tombesi, Caludio Pettinari, Leonardo Ferroni, Simone Sonaglia."Advanced functional coating: study and research to develop anti-fingerprint coating for industry use" (poster). XXXV Congresso delle Sezioni Toscana-Umbria-Marche-Abruzzo -TUMA2016. Giulianova(TE), September 25-27, 2016.

SEMINAR AND WORKSHOP:

Unicamforma Team based learning per le scienze, Camerino 2018
Research Ethics carried out in University of Camerino 2016
English for writing research papers carried out in University of Camerino 2016
Scientific Writing, part II carried out in University of Camerino 2016
DNA G-QUADRUPLEXES from nucleic acid aptamers to highly ordered supramolecular structures carried out in University of Camerino 2016
Materials for Sodium-ion batteries carried out in University of Camerino
Horizon 2020 carried out *in* University of Camerino 2016