

Sogand Musivand

STUDIES APPLIED FOR PhD student since 2021-01 at Sapienza university of Rome

WORK EXPERIENCE

2016–2017 **Laboratory Teacher assistant**

Advanced Biotechnology Lab

2017–2018 **Teacher Assistant**

Kinetics and Reactor Design, Heat Transfer

19 Nov 2017–26 Dec 2018 **Research Assistant**

22 January 2024– Until Now **Research assistant (Sapienza University of Rome)**

EDUCATION AND TRAINING

Sep 2020 – January 2024

Doctoral student in Chemical Processes for Industry and Environment
sapienza University of Rome, Rome (Italy)

-Department of Chemical Materials and Environment Engineering'

-Thesis subject: plastic wastes management into valuable chemical products through thermochemical processes (HTL and Pyrolysis)

25 Oct 2015–13 May 2018

Master of Science- Thesis Title: 'Biohydrogen, Acetone, Butanol and Ethanol production from cellulosic substrate by co culture of clostridium Acetobutylicum and Enterobacter aerogenes'.
Isfahan University of Technology, Isfahan (Iran)

-Work alone or as part of a team to ensure that project deadlines are met

-Interpret project plans, specifications and determine quantities of materials required to gain renewable energy

-Use test instruments to analyse material

-Providing relevant training to junior laboratory

15 Oct 2011–22 Oct 2015

Bachelor of Science: chemical engineering

Sahand University of Technology, Sahand, East Azerbaijan Province (Iran)

-Research methods, Thesis Title: 'Chemical treatment of phenolic wastewater'.

-Organic chemistry, analytical chemistry, physical chemistry

-Mass and heat transfer

-Chemical engineering software

-Fundamentals of chemistry, polymer technology and oil engineering

PERSONAL SKILLS

Mother tongue Persian

Foreign language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B1	C1	C1	B2
Italian			B2	A2	

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages - Self-assessment grid

Communication skills

-Team work: I have worked in various types of teams from research teams to sport and charity.
-Experienced at giving presentations to large audiences.
-Excellent verbal and written communication skills both in an office environment and with external stakeholders.

Organisational / managerial skills

-Multitasking and Team leadership
-Handle responsibility and The ability to work under pressure
-Creative thinking; Reviewing, reporting, and research

Job-related skills

-Pass an internship at Elixir Pharmaceutical; Working in a research team providing relevant training to wastewater treatment

Digital skills	SELF-ASSESSMENT				
	Information processing	Communication	Content creation	Safety	Problem-solving
	Proficient user	Proficient user	Independent user	Independent user	Proficient user
	<u>Digital skills - Self-assessment grid</u>				
	-HYSIS aspen -Microsoft Project - Tecplot				

ADDITIONAL INFORMATION

Research Interests

- Renewable Energy
- Plastic waste depolymerization
- Gasification process
- Methane cracking
- HTL processes

Pyrolysis process
Monomer recovery from plastic waste
Synthesis of Nanomaterials
Waste water treatment
Characterization of Nanomaterials
Biomass pre-treatment

Published Papers	<p>Ranjbarzadeh, R., Akhgar, A., Musivand, S. and Afrand, M., 2018. Effects of graphene oxide-silicon oxide hybrid nanomaterials on rheological behavior of water at various time durations and temperatures: Synthesis, preparation and stability. <i>Powder technology</i>, 335, pp.375-387. https://doi.org/10.1016/j.powtec.2018.05.036</p> <p>Tondro, H., Musivand, S., Zilouei, H., Bazarganipour, M. and Zargoosh, K., 2020. Biological production of hydrogen and acetone-butanol-ethanol from sugarcane bagasse and rice straw using co-culture of <i>Enterobacter aerogenes</i> and <i>Clostridium acetobutylicum</i>. <i>Biomass and Bioenergy</i>, 142, p.105818. https://doi.org/10.1016/j.biombioe.2020.105818</p> <p>Tai, L., Musivand, S., de Caprariis, B., Damizia, M., Hamidi, R., Ma, W. and De Filippis, P., 2022. Co-treatment of plastics with subcritical water for valuable chemical and clean solid fuel production. <i>Journal of Cleaner Production</i>, 337, p.130529. https://doi.org/10.1016/j.jclepro.2022.130529</p> <p>Hamidi, R., Tai, L., Paglia, L., Scarsella, M., Damizia, M., De Filippis, P., Musivand, S. and de Caprariis, B., 2022. Hydrotreating of oak wood bio-crude using heterogeneous hydrogen producer over Y zeolite catalyst synthesized from rice husk. <i>Energy Conversion and Management</i>, 255, p.115348. https://doi.org/10.1016/j.enconman.2022.115348</p> <p>Musivand, S., Bracciale, M.P., Damizia, M., De Filippis, P. and de Caprariis, B., 2023. Viable recycling of polystyrene via hydrothermal liquefaction and pyrolysis. <i>Energies</i>, 16(13), p.4917. https://doi.org/10.3390/en16134917</p> <p>Bracciale, M.P., de Caprariis, B., Musivand, S., Damizia, M. and De Filippis, P., 2024. Chemical recycling of cellulose acetate eyewear industry waste by hydrothermal treatment. <i>Industrial & Engineering Chemistry Research</i>, 63(12), pp.5078-5088.</p>
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	<p>https://doi.org/10.1021/acs.iecr.3c04162</p>
	<p>Coupled Biological and Thermochemical Process for Plastic Waste Conversion into Biopolymers Marzulli F., Musivand S., Arengi M., De Caprariis B., De Filippis P., Marchetti A., Majone M., Villano M., 2023. Chemical Engineering Transactions, 100, 469-474. https://doi.org/10.3303/CET23100079</p>

Conferences	<p>De Caprariis, B., Paola Bracciale, M., Damizia, M., De Filippis, P. and Musivand, S., 2023. Hydrothermal liquefaction of mixed plastic waste to obtain bio-crude and a residue composed by pure poly-olefins. https://dc.engconfintl.org/pyroliq_2023/14/</p> <p>Musivand, S., De Filippis, P., Damizia, M., Paola Bracciale, M. and De Caprariis, B., 2023. Hydrothermal liquefaction of three types of polyurethane wastes; effect of ethanol on decomposition and chemical recovery. https://dc.engconfintl.org/pyroliq_2023/22/</p>
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Extracurricular activities	<p>-Sport: Swimming, Soccer, Table tennis -Music: Guitar -Art: Photography, Chiaroscuro</p>
References	<p>- Professor Paolo De Filippis, DIPARTIMENTO DI INGEGNERIA CHIMICA MATERIALI AMBIENTE, ITALY. Email: paolo.defilippis@uniroma1.it</p> <p>- Benedetta DE Caprariis, DIPARTIMENTO DI INGEGNERIA CHIMICA MATERIALI AMBIENTE, ITALY. Email: benedetta.decaprariis@uniroma1.it</p> <p>- Dr. Hamid Zilouei, Department of Chemical Engineering, Isfahan University of Technology, Isfahan 84156-83111, Iran Email: hzilouei@cc.iut.ac.ir</p>