

# Save the date CREATOR Summer School on Plastics Recycling

**12.-14.7.2022, Linz, Austria**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement no. 820477

# Summer School Agenda

## Three days on plastics recycling

### Lectures on:

- Why are plastics used in so many applications?
- How does plastics' recycling work in general?
- What are the different possibilities for recycling?
- How do logistics and supply chains work for recycling?
- How to get plastics back to products? = How to reuse plastics in new products?
- What is the legal and regulatory framework?

### Site visits:

- Live demonstration of plastics' recycling machine
- Insight into a waste logistic center and a recycling plant
- See how recycling machines are constructed

*Social program:  
visiting the Ars Electronica center, get a good view  
of Linz and continue discussions over a joint dinner*



# Summer School

## Our lecturers



Stephanie Haider, Recycling  
Process Engineer & Analytics



Moritz Jäger-Roschko,  
Researcher Sustainable  
Logistics and Supply Chain



Mathilde Taveau,  
Regulatory Advisor at  
Plastics Recyclers Europe



Christoph Burgstaller, Professor for  
Sustainable Plastics Engineering



Jörg Fischer, Professor for  
Plastic Materials and Testing

*Additional speakers with recycling  
experience will join!*



# Organisation

## Target group

- PhD students with a background in chemical or plastics engineering, technical studies, people who are interested in the topic of recycling

## Application

- For further information or application, please send your CV and complement the following sentence "I am interested in plastics recycling because..." to Irma Mikonsaari (irma.mikonsaari@ict.fraunhofer.de)

## Cost, programme, miscellaneous

- The Summer School costs 120 €/person, and includes visits, lectures, dinner, lunches and breaks and the social events
- Travel and accommodation is not included in the price and must be paid by the participants
- The programme will start with a welcome on the evening of 11<sup>th</sup> July, and will end in the evening of 14<sup>th</sup> July



# CREATOR

COLLECT . PURIFY . REUSE

## what does **CREATOR** do?

- **Collection** of raw materials
- **Removal** of flame retardants
- **Reuse** of secondary raw materials

## THE PROCESS





# INNOVATION

A new, cost-effective approach



Consideration of the whole value chain for various polymers ABS, PC, PA, PS



Characterisation and sorting of large polymer parts containing brominated flame retardants at **kg scale**

Removal of Br-FR down to **0,1 wt-%** in continuous process at kg scale

## MARKET INTEGRATION

CREAToR delivers solutions to various steps of the production chain

construction & demolition



waste source  
end-product re-use

electrical & electronic equipment



waste source  
end-product re-use

aeronautics industry



waste source  
end-product re-use

automotive industry



end-product re-use

recyclers



characterisation in the sorting and removal of hazardous components

polymer parts manufacturers



labeling and re-additivation

OF INTEGRAL LOGISTIC CONCEPT



labelling of Br free material



modification for reuse



Sorting line with LIBS technology (Laser-Induced Breakdown Spectroscopy) for characterisation



Extractive extrusion with super critical CO<sub>2</sub> and NADES ionic liquids for the purification



Re-additivation for the re-use (new flame retardants, processing additives)

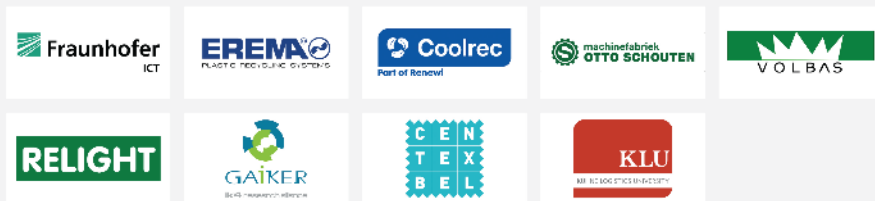


Labeling of the material to ensure hazardous flame retardant content < 0,1 wt-%

TECHNOLOGIES

# THE CONSORTIUM

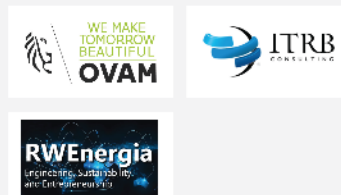
## RECYCLING



## RE-USE



## LCA • DISSEMINATION • LEGAL



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<https://creatorproject.eu/>

<https://www.linkedin.com/company/creatorproject/>