

Partner Name	Partner Type	Supervisor	Country	Project Role Description – PhD 2
Bloom	Industry *ESR Host Location	Remy Buser Florent Héroguel	Switzerland	<p>Project description: Development of new lignocellulosic biomass valorisation processes to supply the petrochemical industry with sustainable carbon.</p> <p>Lignocellulosic biomass (wood and agricultural wastes) is an important source of sustainable carbon and will play a central role in the upcoming transition away from fossil resources. Yet, current valorisation methods are strongly limited by undesired condensation reactions occurring during the initial pre-treatment step. To overcome this limitation, LPDC and Bloom Biorenewables Ltd have developed a unique protection mechanism – termed Aldehyde-Assisted Fractionation (AAF) – which leveraged on latest understanding in biomass chemistry and disrupted the field (Shuai et al., Science 2016). This method can, for the first time, extract a functionalise form of lignin and sugars that retains their native potential.</p> <p>In the project, the PhD applicant will further investigate the chemistry of lignin and sugars to optimize the production of high-value products. The candidate will beneficiate from 5+ years of development around the AAF technology in a competitive environment. He/She will use established protocols to fractionate biomass, optimise the efficiency of lignin conversion to monomers and design routes to sustainable products, including fragrances, aroma, plastics, cosmetic ingredients, speciality chemicals, bulk chemicals and fuels. Producing high-value products is essential for the development of biorefinery concepts. By contributing to the AAF technology, the candidate will play an essential role in making biorefining more cost-competitive and support the establishment of a strong bio-based industry.</p>
EPFL Ecole Polytechnique Federale de Lausanne	Academic	Jeremy Luterbacher		

The ESR will be employed and hosted by Bloom Biorenewables. Any queries on this post please contact Talent4BBI@biorbic.com

ESR's Recruitment Timeline Process										
M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13
Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
Recruitment Call Open and Applications Assessed					Interviews	ESR's hired, move to hosts. Fellowships commence				
Month 13 - Month 60 - Fellowship Implementation										

