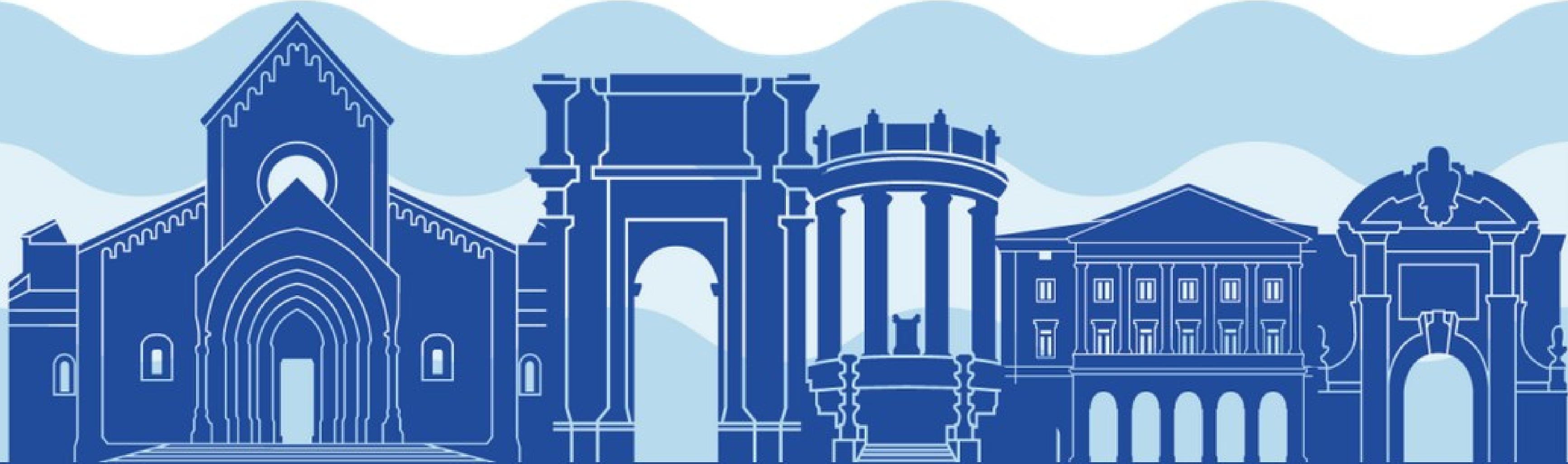




MOLE VANVITELLIANA ANCONA, ITALY 10/12 JUNE

Evaluating Binder Ageing and Polymer Degradation Levels in Different Reclaimed Asphalt Pavement (RAP) fractions

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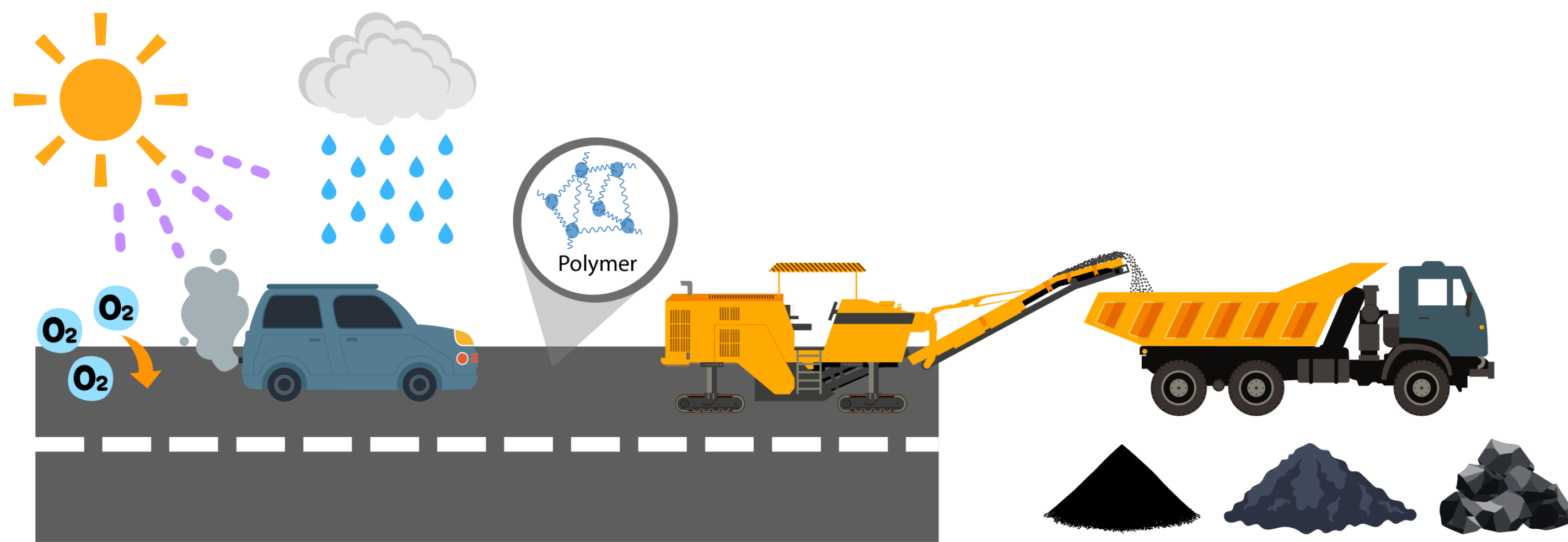
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INTRODUCTION

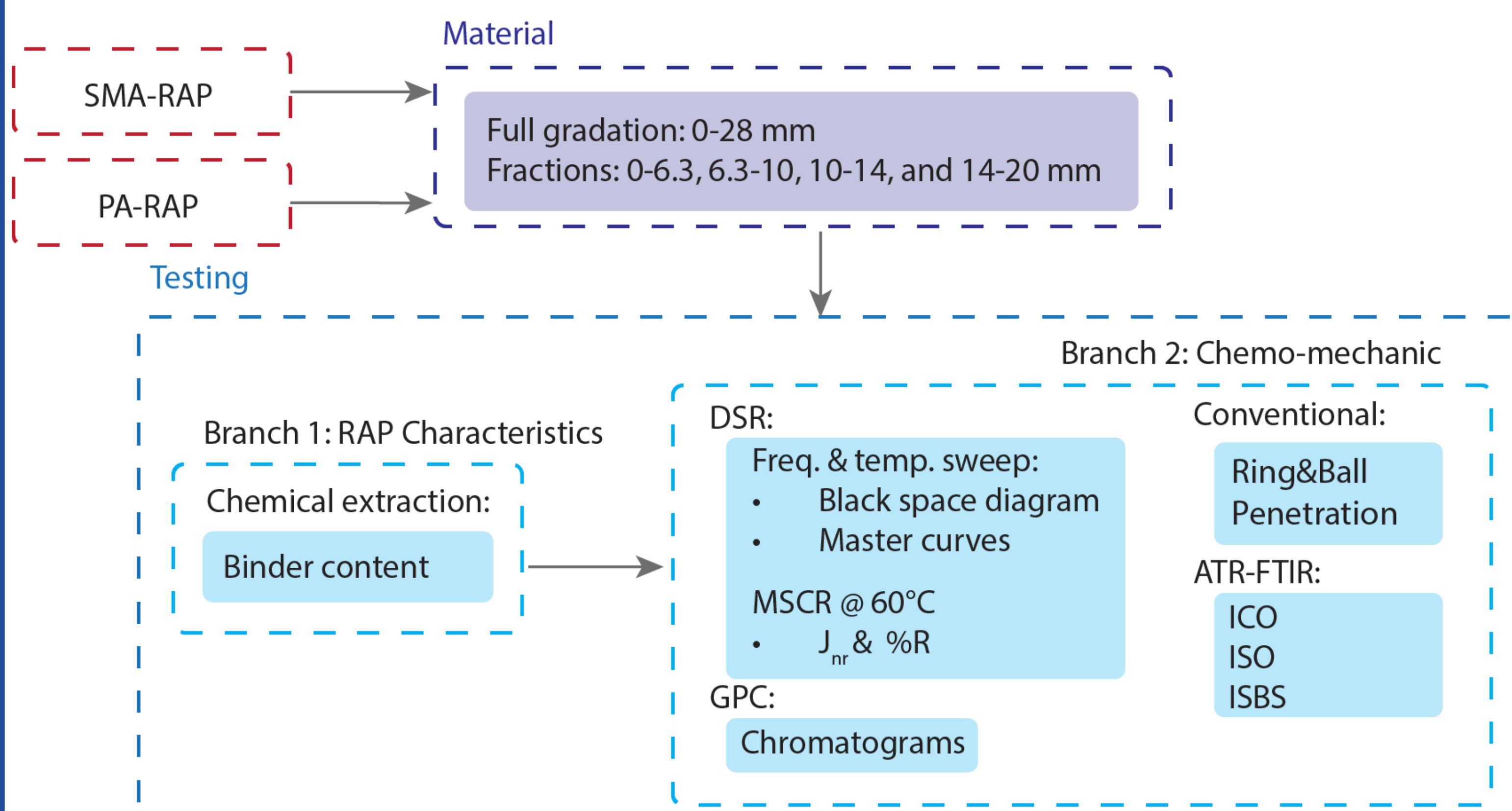
- Reclaimed asphalt pavement (RAP)** is widely available, but its use in surface layers is often restricted due to concerns about long-term performance and limited knowledge of field ageing. The presence of a polymer, often **styrene-butadiene-styrene (SBS)**, increases the complexity of binder ageing. To optimize the recycling of these materials, it is essential to understand their variabilities.



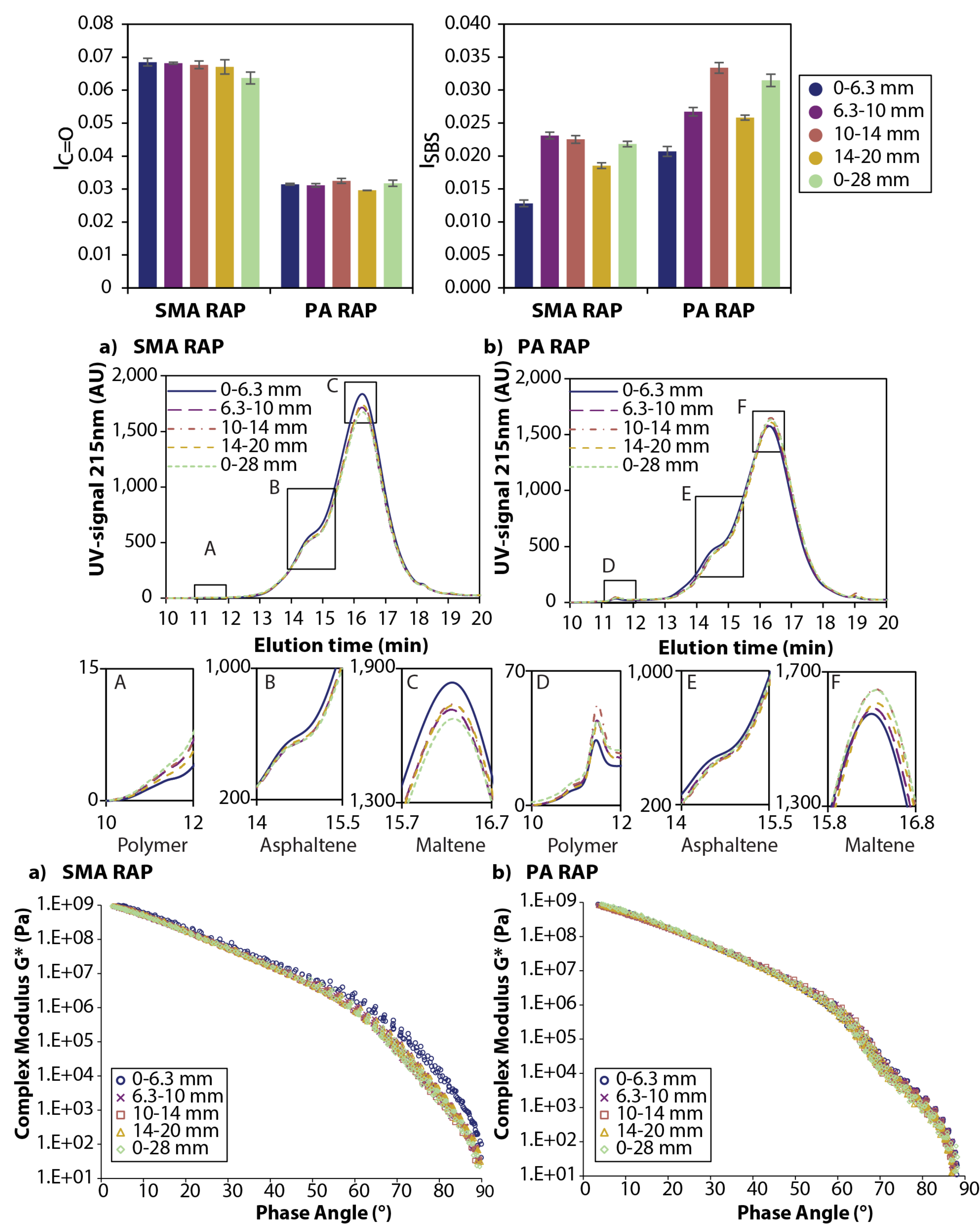
Objective

- Evaluate the **ageing level of polymer-modified bitumen** in different **RAP fractions** due to field ageing

Methodology



Results



CONCLUSIONS

- 0-6.3 mm RAP fraction** shows **highest polymer degradation** (FTIR+GPC)
- Ageing is **inhomogeneous** across fractions
- Rheology** varies slightly due to both polymer and base binder ageing
- Fine fractions may need **tailored rejuvenation**
- Supports **fraction-specific mix design** for high-RAP mixtures

Acknowledgements