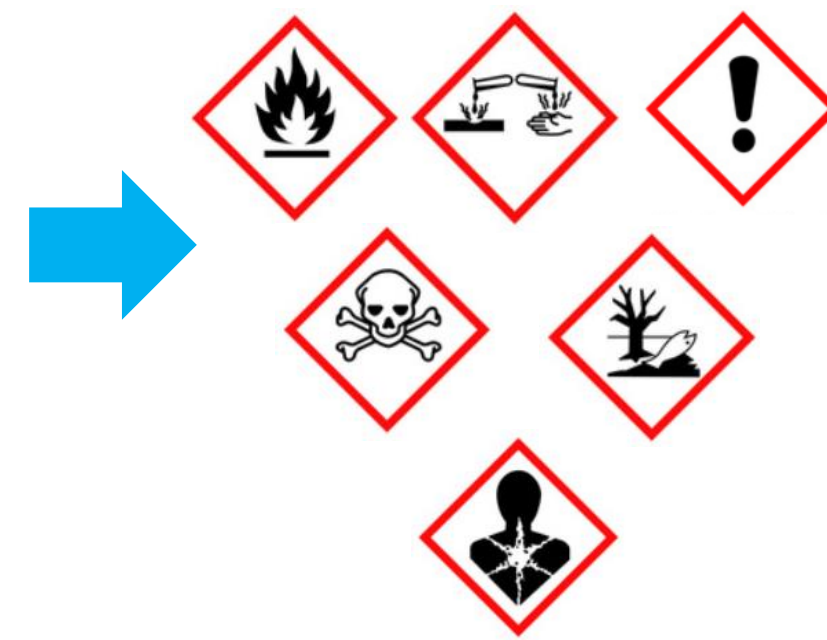
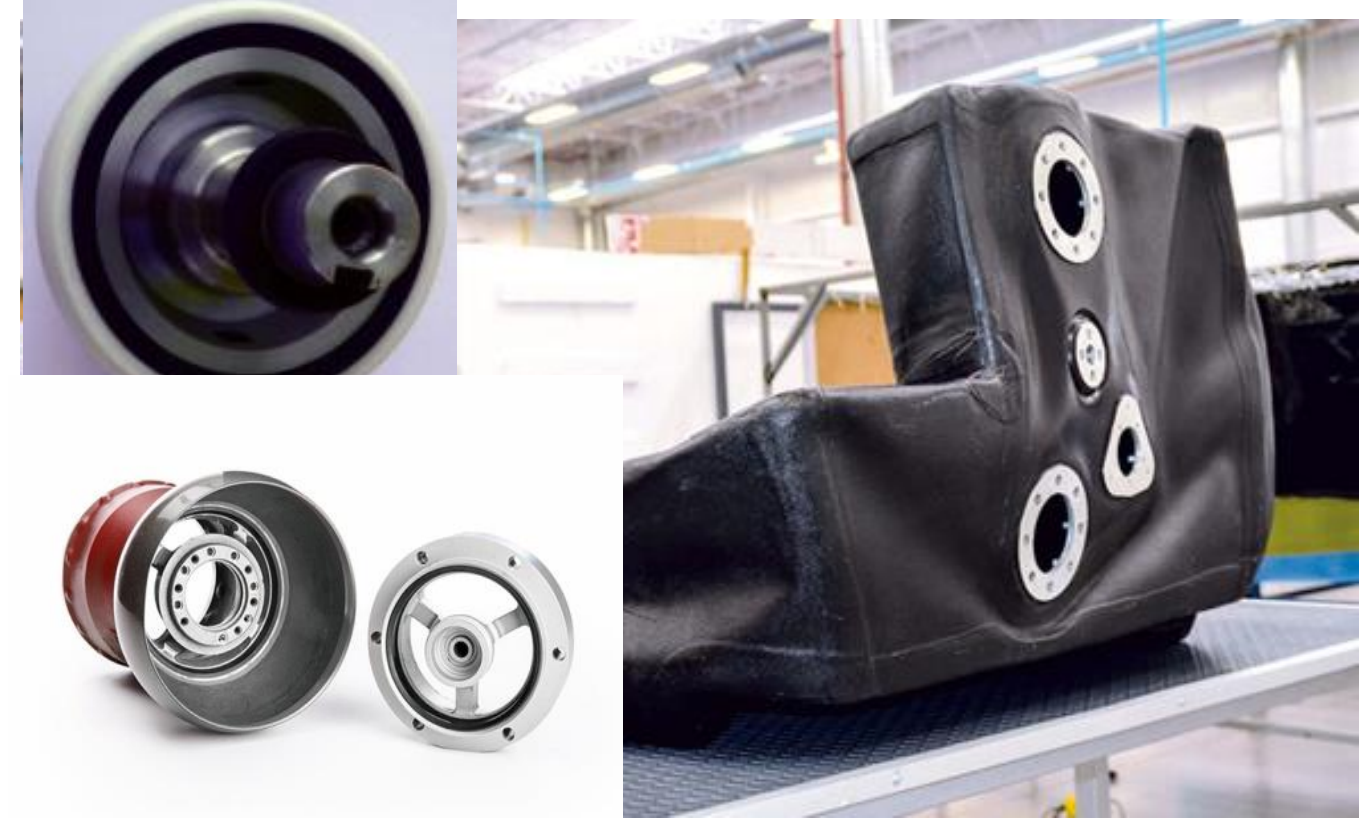


# Plasma polymer for enhancing adhesion bonds of metal/elastomer assembly

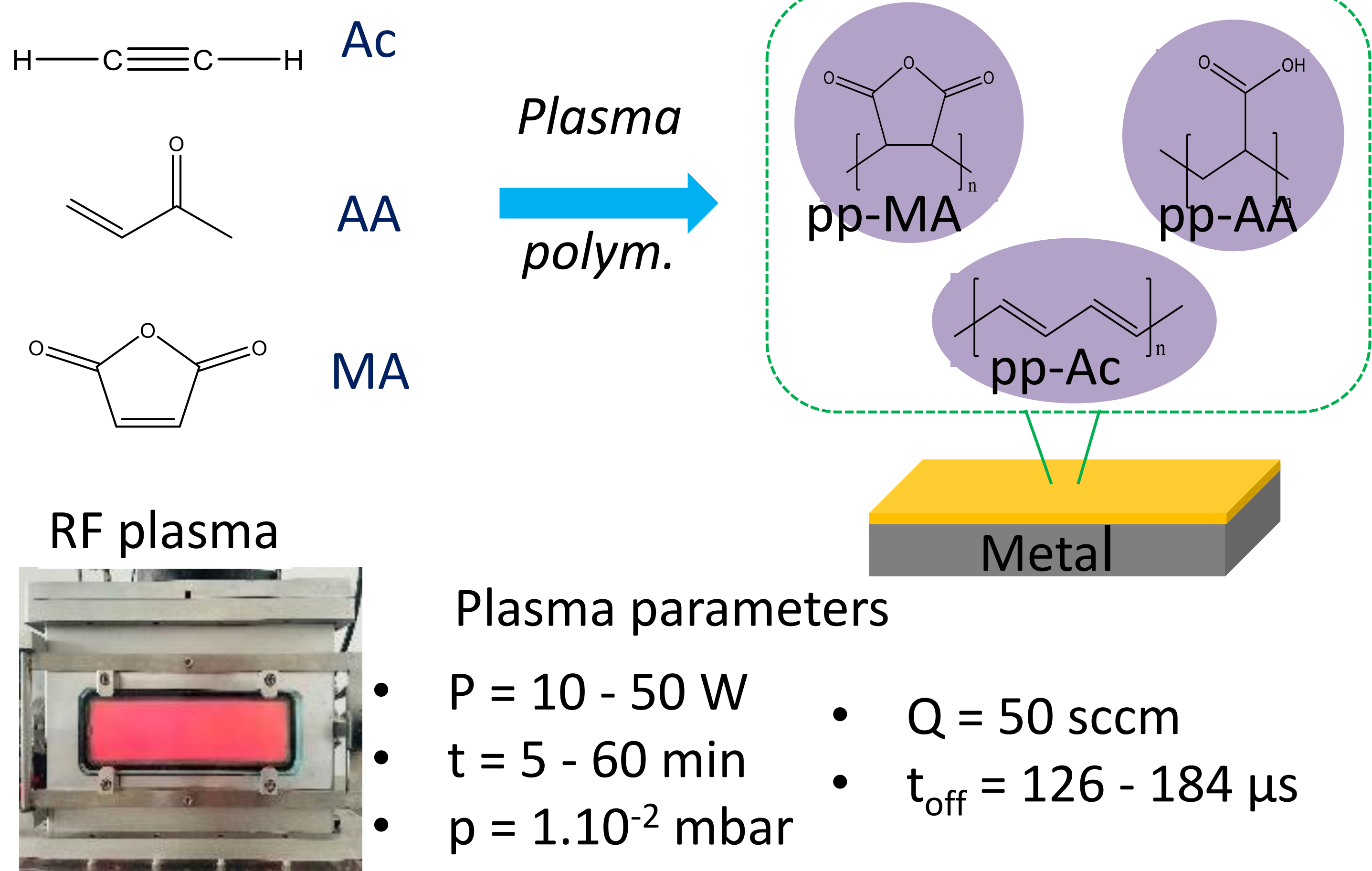
M. JI, L. BENYAHIA, F. PONCIN-EPAILLARD, IMMM, UMR CNRS 6283 Le Mans Université, France

## Objective

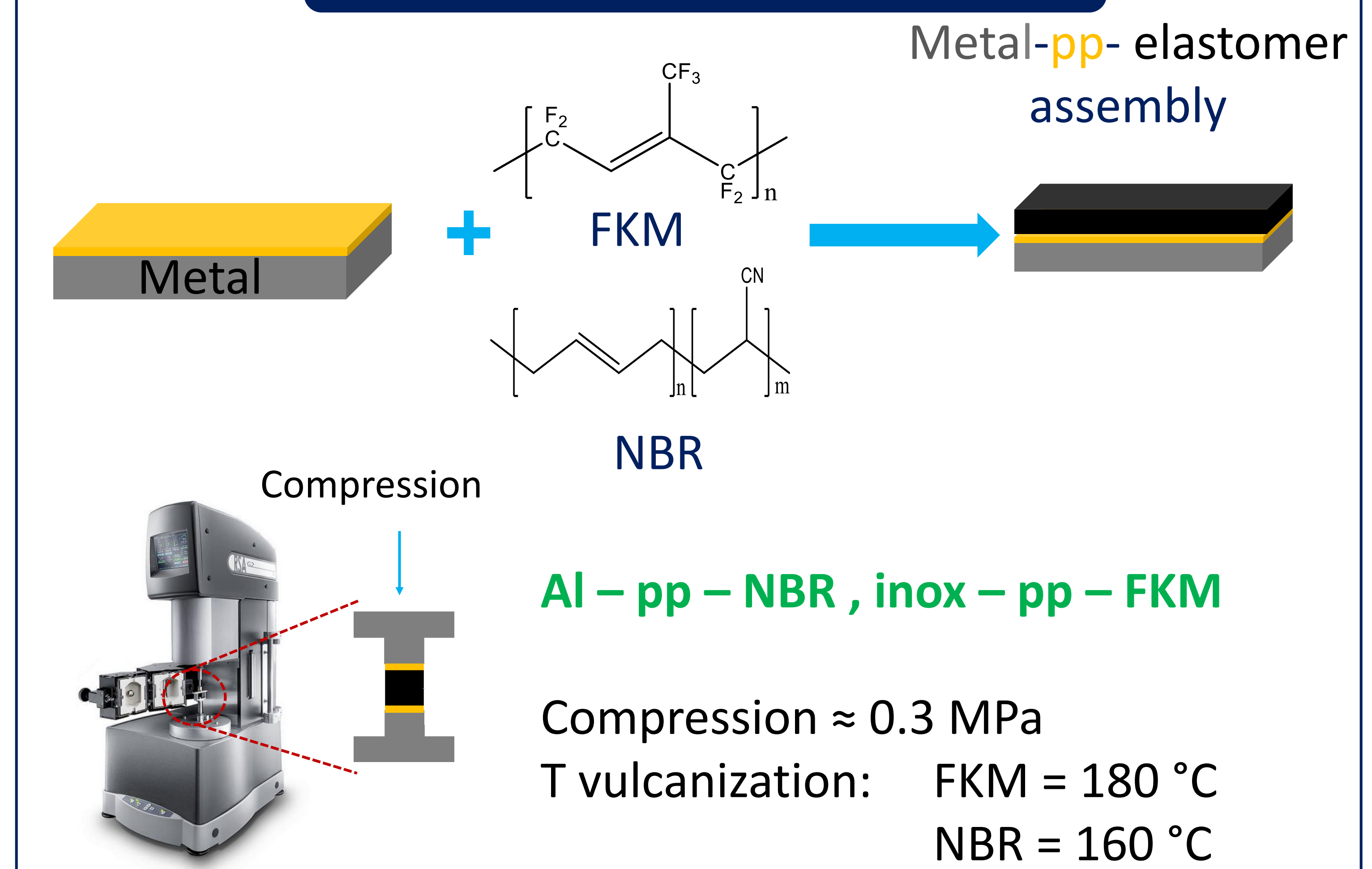


To prepare an ecofriendly adhesive plasma joint for a robust assembly

## Plasma coating



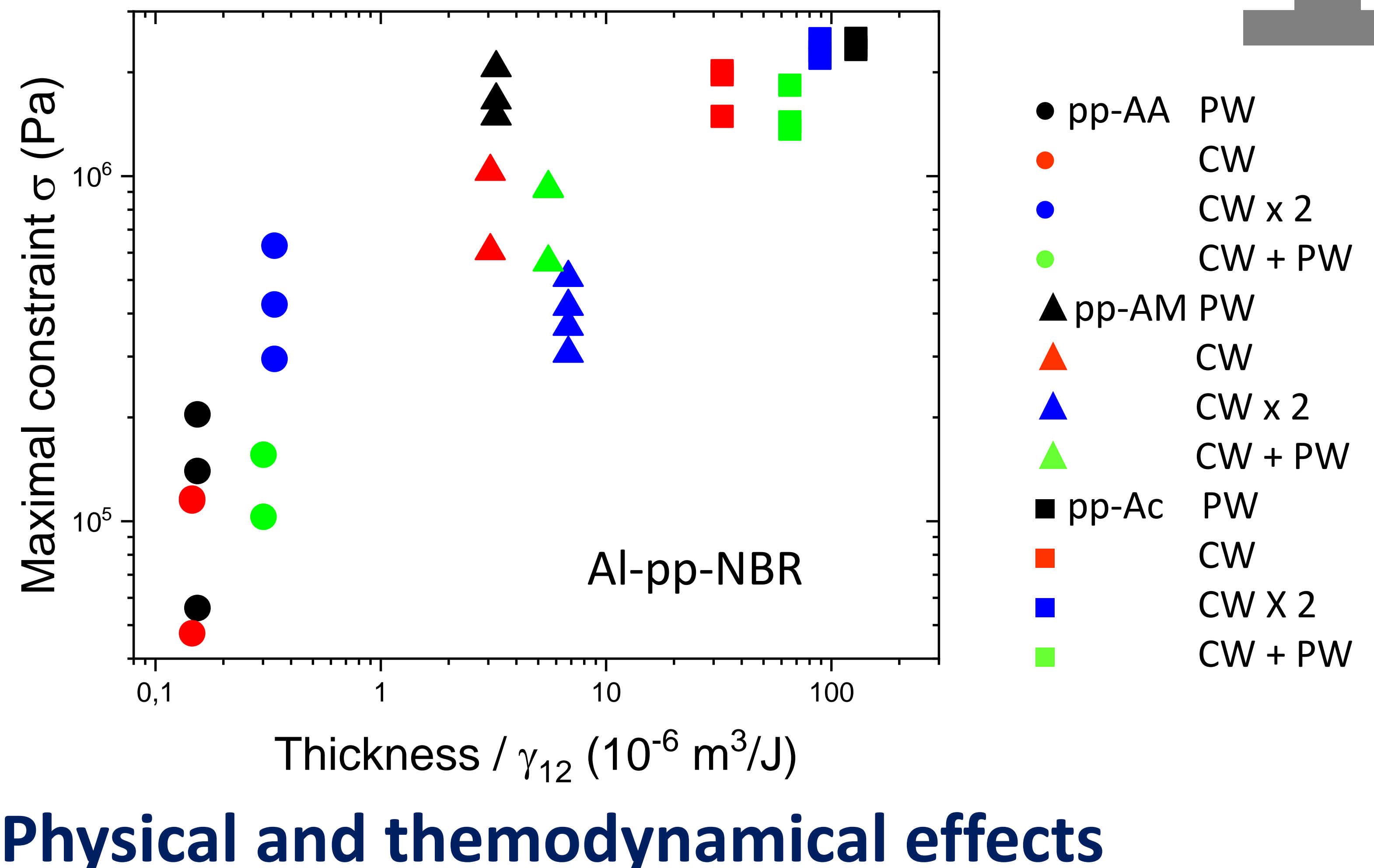
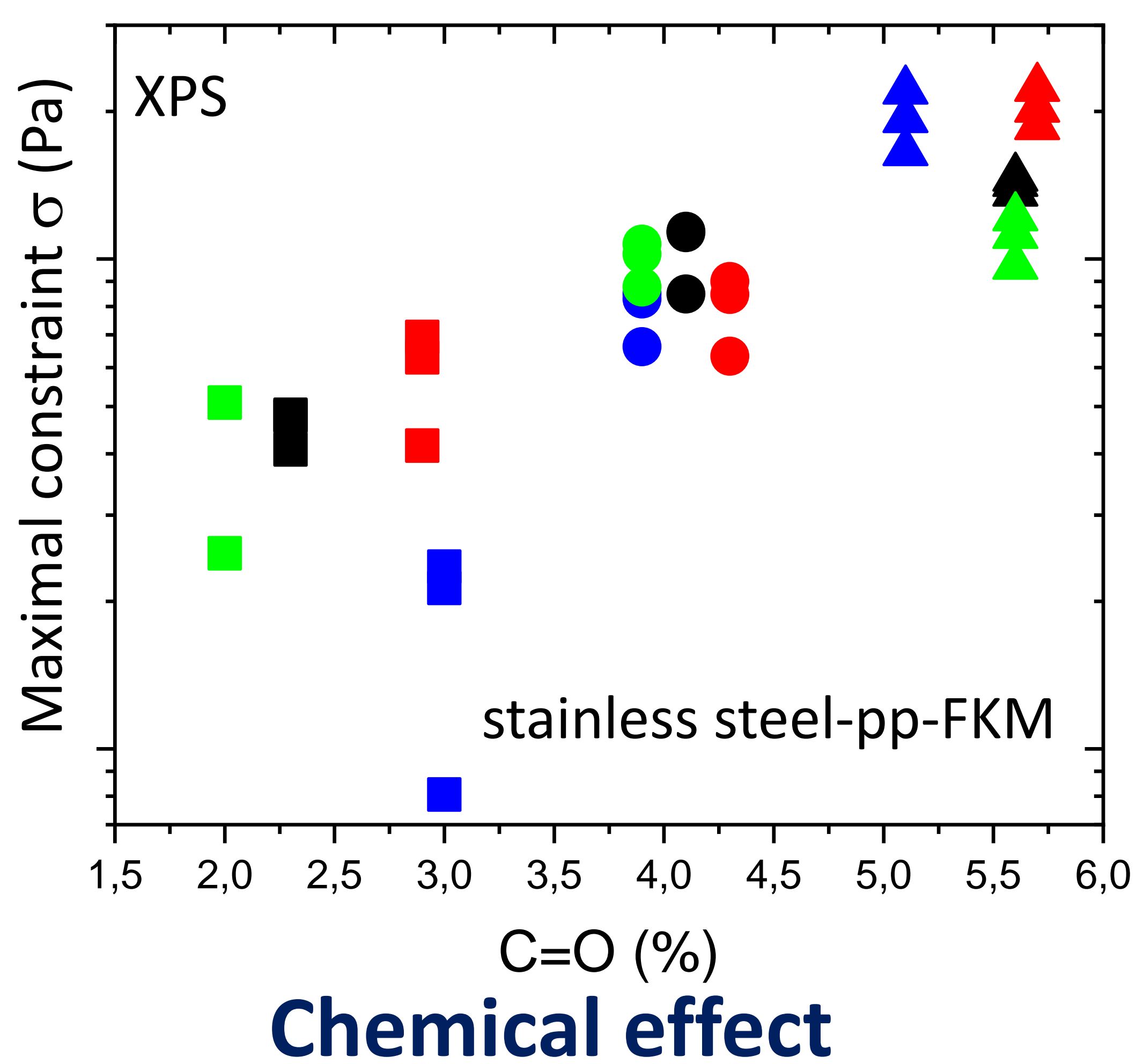
## Adhesive vulcanization



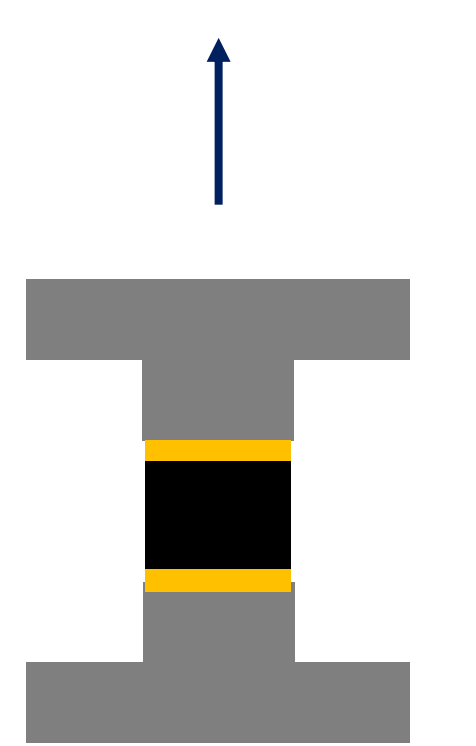
## Assembly cohesion

Mechanical behavior of assemblies with pp(Ac, AA or MA) for ≠ plasma parameters

PW : functionalized, CW + PW : thick + functionalized, CW : crosslinked, CW x 2 : thick + crosslinked layers



Traction at cst speed



## Conclusions

- ❖ Adhesion force and applied strain increased after plasma treatment
- ❖ Dependence of the mechanism of adhesion on each assembly element