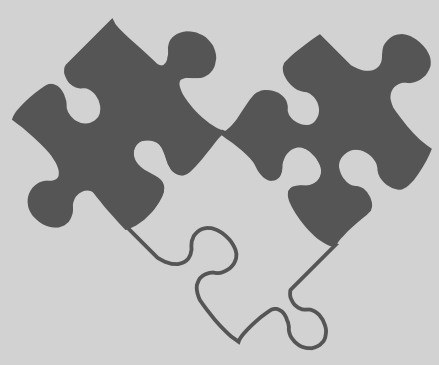
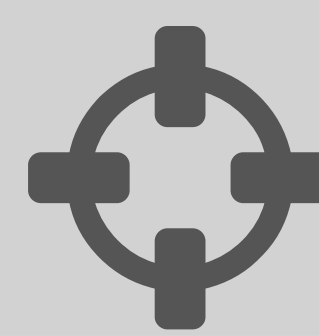
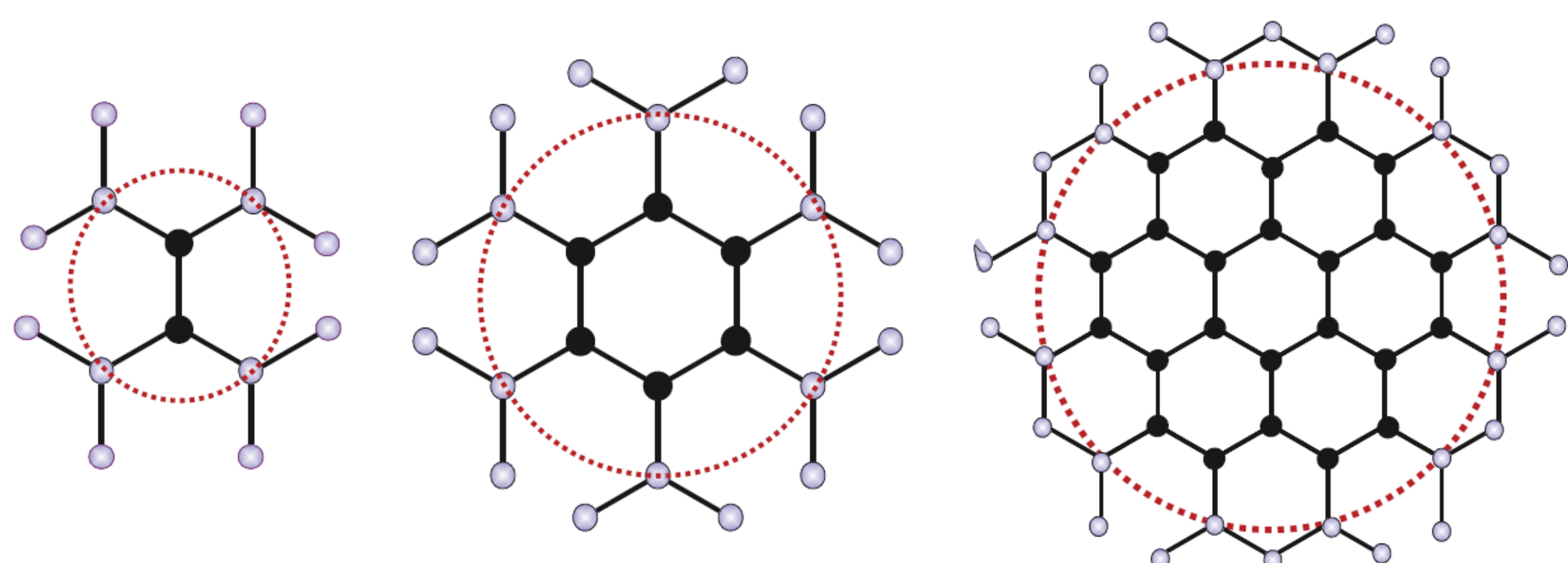


Multifunctional Composite Structures through Graphene

BACKGROUND

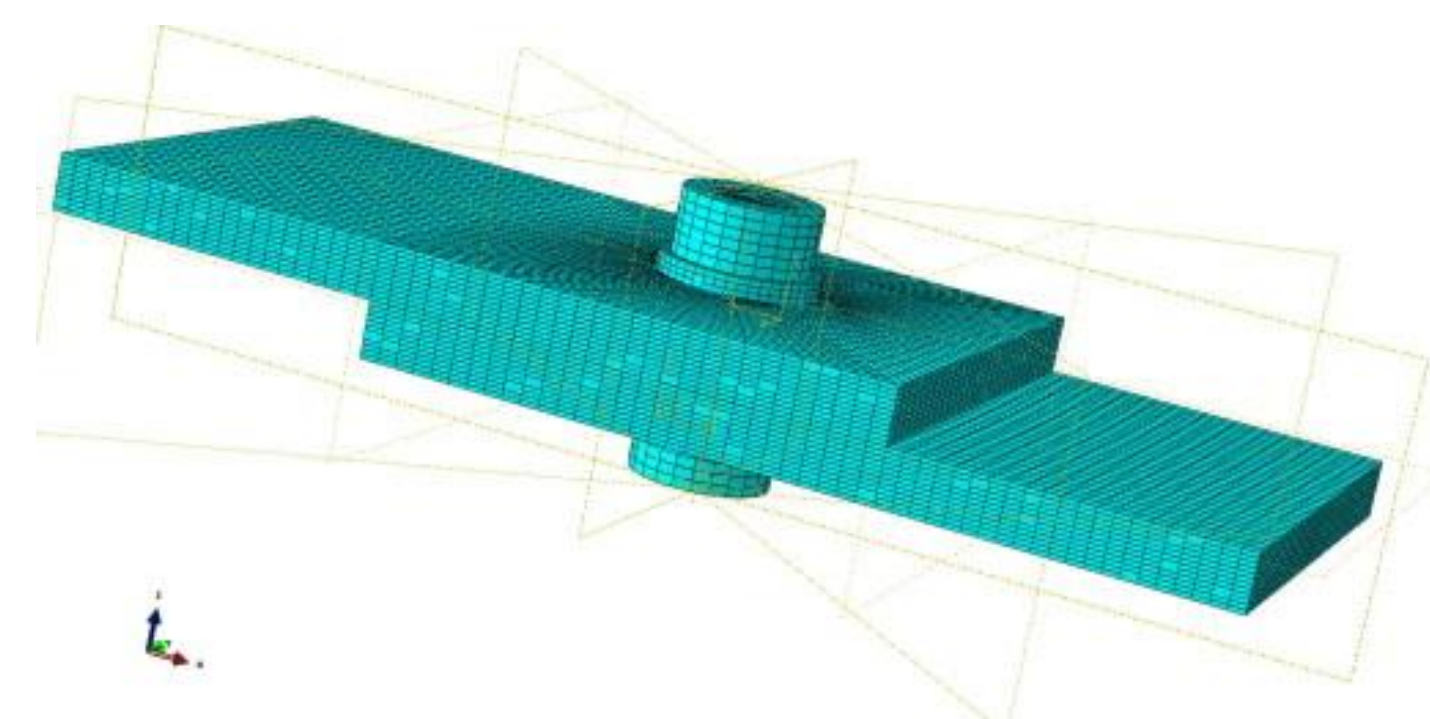


- Knowledge already established in
 - Micromechanics
 - Homogenization techniques
 - Continuum-molecular modeling of graphene
 - Advanced theories for composite laminates



GOALS

- Enrich epoxy with graphene to enhance mechanical performance of bolted composite joints
- Conduct experimental coupon level tests to characterize properties
- Improve mechanical strength, damage tolerance and electrical conductivity
- Target: 20% weight reduction



APPROACH



- Swedish endowed chair of Aeronautics at ITA funded by SAAB and CISB
- One VINNOVA project already established
- Seeking partners to form greater network on graphene enhanced matrix behavior
- Submit joint projects to support mobility in coming years
- Encourage teaching and research activities at Chalmers/ITA/industrial partners
- Exchange doctoral students and work on co-supervised theses