

Heat and Mass transfer at ASML

Keep the whole semiconductor industry's progress on track

We've pushed technology so far that controlling the environment inside our scanners is now the key that unlocks further improvements. That puts heat and mass transfer experts at the heart of our future. Current performance demands mean our system components have a thermal expansion limit of around 0.1 nm - about the size of an atom. That translates to a maximum allowable temperature change of 1 mK or less. But those components are part of a system that generates hundreds of kilowatts of heat. So how do we keep the core components thermodynamically stable at the sub-millikelvin level?

Matter matters in fluid mechanics

Understanding how tin droplets move in an atmosphere of just 2 Pascals is essential to maintaining the performance of the million-dollar optics in our Extreme Ultra Violet systems. And once our heat and matter transfer experts understand the phenomena, they need to design a 100% failsafe system to control them.

Check our vacancies

Real science, real world

Unlike other career opportunities in this area, you'll be developing real machines. The innovations you generate could be realized and operating at our customers within 2-3 years. You could be on the frontline of system development and customer support. And you'll be looking at the whole system - a new heat source in one component could cause thermal issues everywhere.

Unique collaboration

Over 800 people work together to develop each ASML system. You'll need the people skills to negotiate and balance the requirements of many different areas to create the best possible systems for our customers.

Come and join us

