



Resist outgassing plans at IMEC

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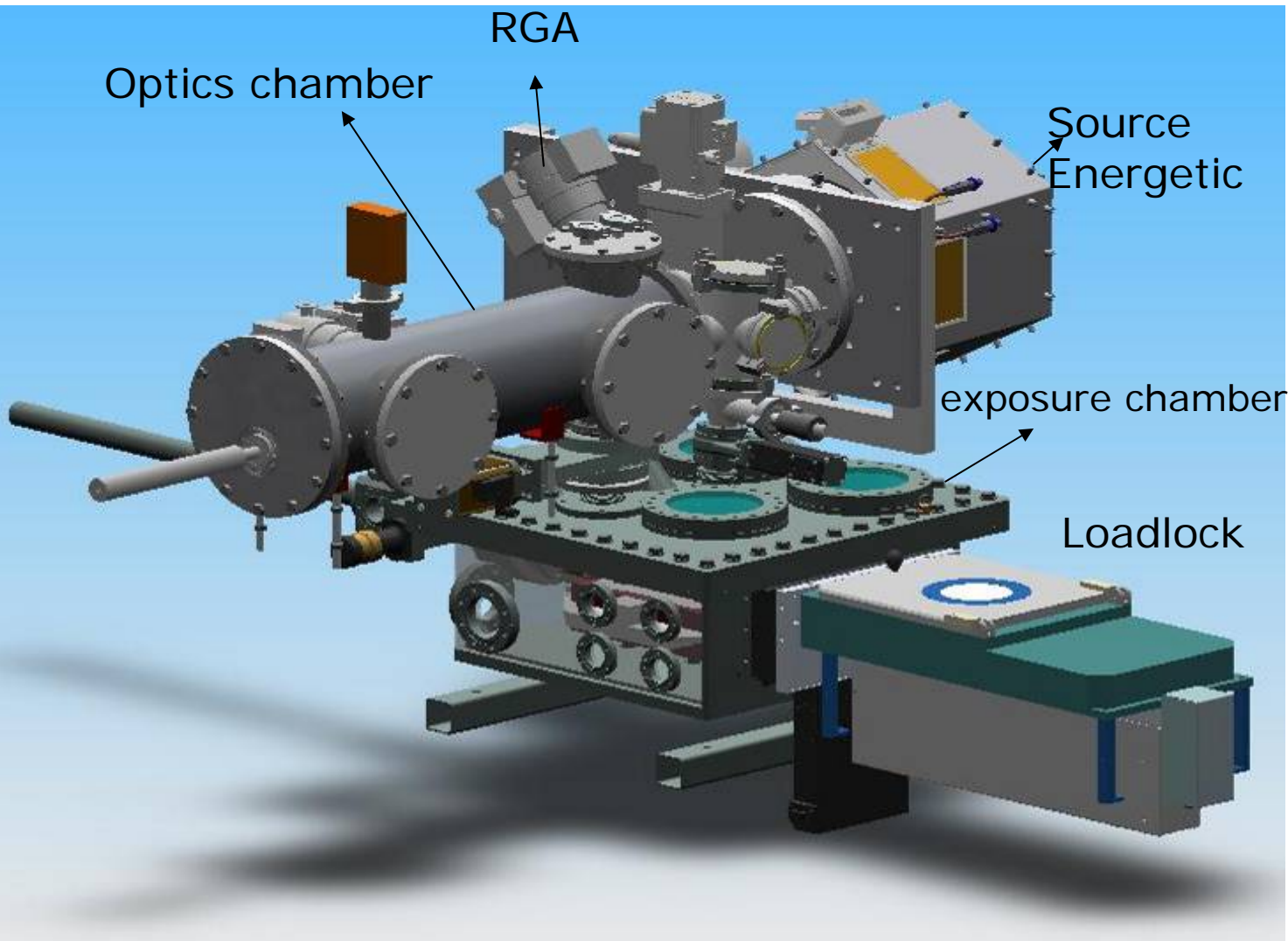
Introduction

- **Motivation**
 - IMEC installed an ADT of ASML
 - Keeping optics contamination under control is essential for EUV tools
 - Only resists that pass the ASML outgassing specifications can be used on the ADT
- **Standard outgassing methodology**
 - RGA/QMS techniques demonstrated spread over several order of magnitude for out gassing rates for the same of sample measured at different facilities (round robin test organized by IEUVI resist TWG)
 - RGA/QMS detect species desorbed from resist, not ones that are going to effectively contaminate
- **ASML proposed a new protocol**
 - The approach consist in measuring the impact of the resist outgassing directly on a multilayer mirror element through reflectivity measurements.

Resist Outgassing facility at IMEC

- IMEC ordered an outgassing tool from EUV technology
- Primary application : Resist outgassing testing with the ASML protocol based on mirror reflectivity degradation
 - This outgassing test will be an integral part of the resist benchmarking procedure
- Equipped with RGA analysis capability
 - Quadrupole Mass Spectrometer System.1-512 am
- Reticle contamination capability
 - Contaminants inlet via leak valve

Design of the outgassing tool EUV technology



Time line

Shipment

31 May 2007

Installation and
SAT at IMEC

June 2007



aspire invent achieve

imec

