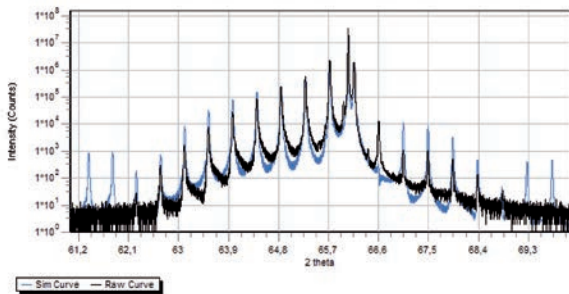
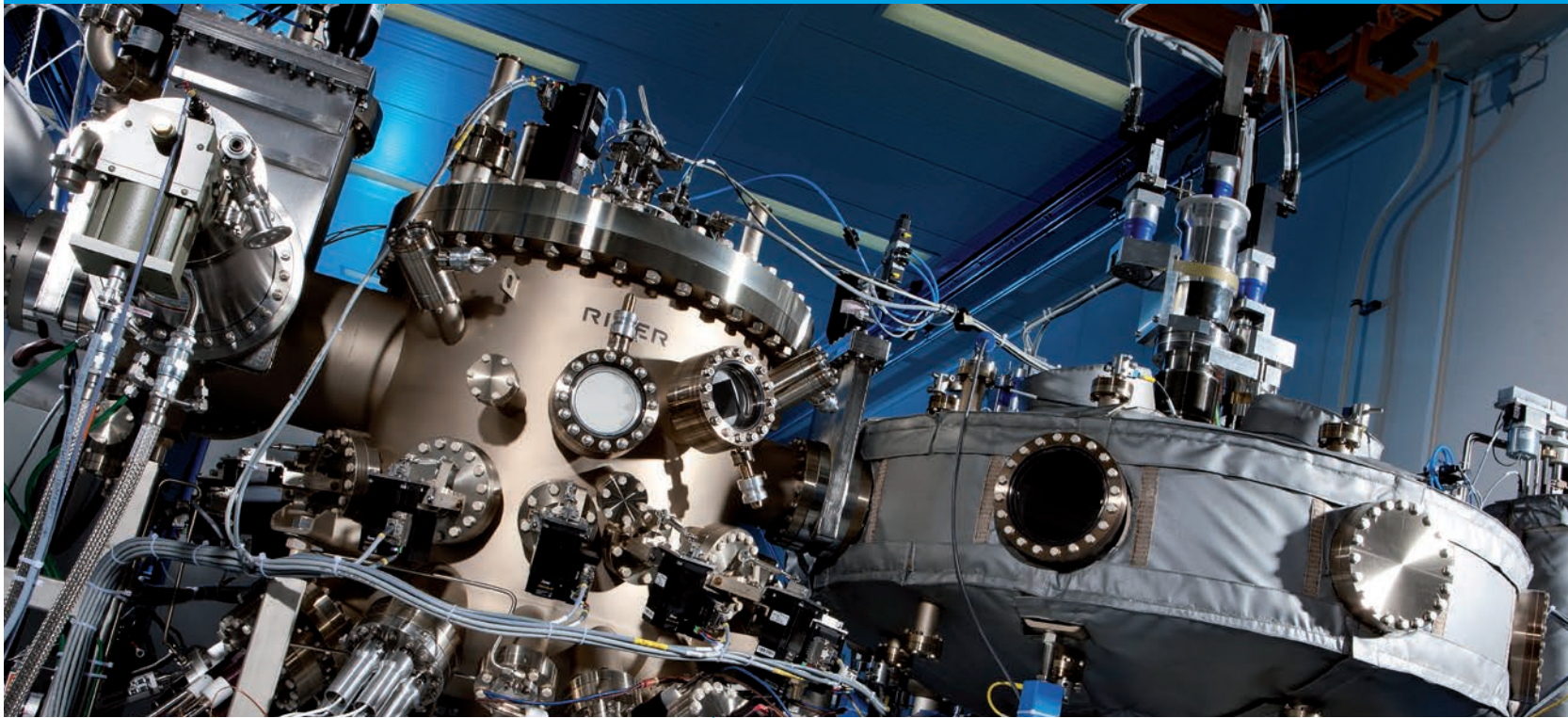


# MBE 412 CLUSTER

## Riber 4'' multichamber system



X-Ray diffraction spectrum of GaAsSb/GaAs superlattice Courtesy of LAAS Toulouse (Fr).

### ■ Multi-chamber configuration

Clusterized system - up to seven vacuum independent modules connected - Fully automated (and manual); Standard interface for connection to modules: ALD, PLD, PVD, Metallisation, STM...

### ■ 12 large source ports growth chamber

Compatible with all Riber sources: As-VAC; P-KPC; Sb-VCOR; N-RF-plasma; NH<sub>3</sub>, Cbr<sub>4</sub>-Injectors; large capacity group III cells...

### ■ In-situ monitoring capabilities

RHEED, ellipsometry, OFM, temperature control (kSA, LAYTEC equipment integration), Beam flux gauge, XTAL, QMS...

INNOVATIVE SOLUTIONS FOR MBE SYSTEMS

RIBER

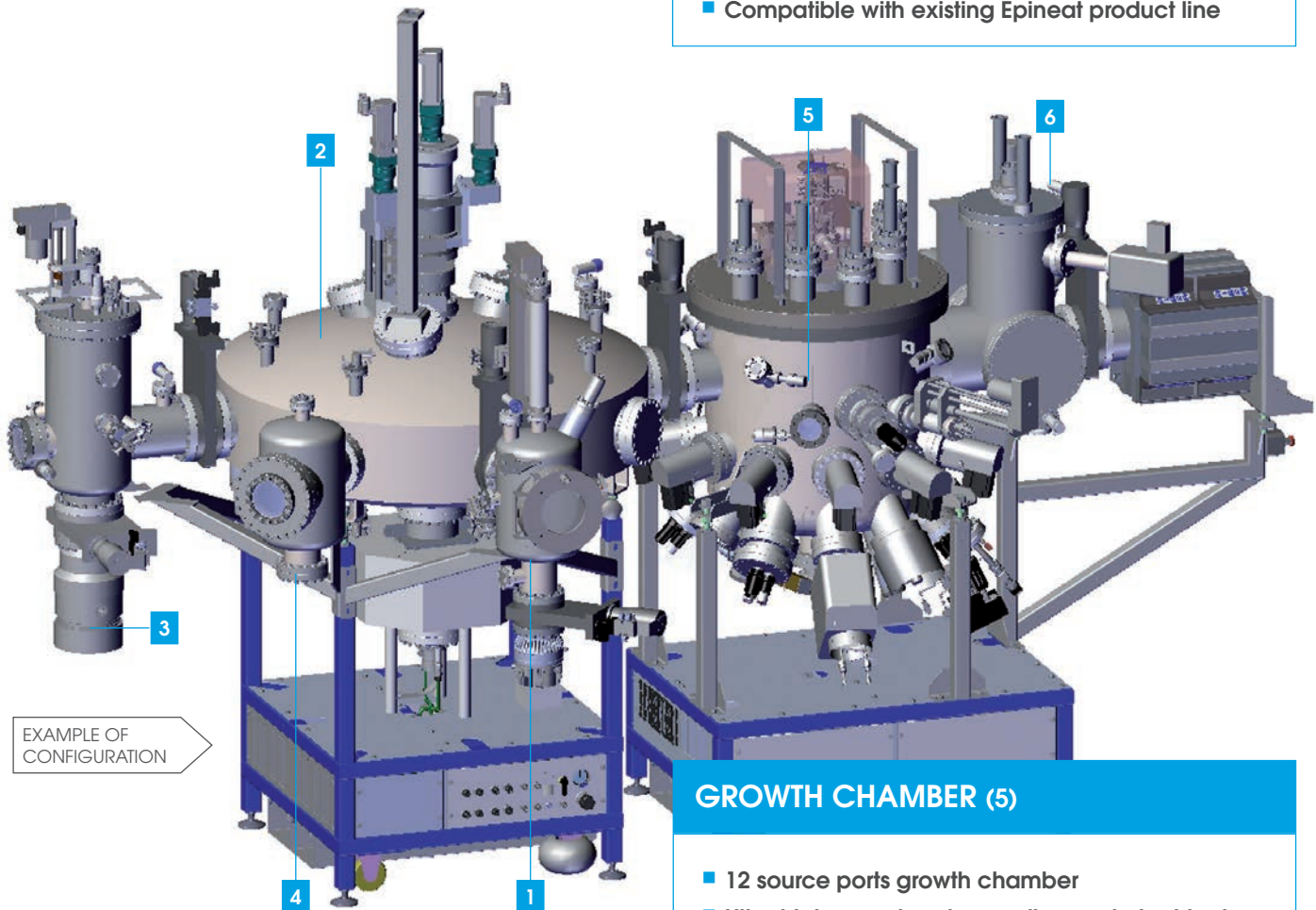
RIBER ADDON VG SEMICON

## LOADING /UNLOADING CHAMBER (1)

- **Easy access**—front door with inspection viewport  
Loading height = 1.33 m
- **Minimum 10 platens loaded at once**
- **$5 \cdot 10^{-7}$  Torr in less than 30 min** degassing IR lamps, high pumping speed

## UHV CLUSTER TOOL (2)

- **Up to 7 independant vacuum modules connected**
- **Standard interface** connection to other analysis equipment or other deposition techniques, or custom needs
- **Fully automatic** platen transfer sequences through Crystal process controller
- **Compatible with existing Epineat product line**



## CUSTOM DESIGN TREATMENT CHAMBER (3)

- **Surface treatment / deoxidation:**  
Heating station, gas, ebeam capabilities
- **Surface analysis:**  
RHEED, kSA, LAYTEC equipments

## STORAGE (4)

- **5 platens** at minimum
- **Easily upgradable to specific needs**

## GROWTH CHAMBER (5)

- **12 source ports** growth chamber
- **Ultra high speed and easy dismount electrical motor cell shutters**
- **High temperature, high uniformity substrate heater, oxygen resistant substrate heater**
- **Easy remote control of equipment**  
Ethernet connection
- **All modern in situ monitoring capabilities**

## VACUUM SYSTEM (6)

- **Flexible pumping configuration**  
3 large ports available for all type of pumps  
Independant titanium sublimation pump
- **$< 5 \cdot 10^{-11}$  Torr ultimate pressure guaranteed**
- **LN2 cooled cryopanel** surrounding the growth region

III-V / II-VI / GaN / MCT / Oxides

### REFERENCES:

LETI (FR), SOFRADIR (FR), LAAS (FR), ORION (RU), TRUMPF (USA), ASELSAN (TK), SITP (CH).

To find out more please contact : [info@riber.com](mailto:info@riber.com)