



# Cooperation offers



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(BELGIAN CERAMIC RESEARCH CENTRE)

## Project Details

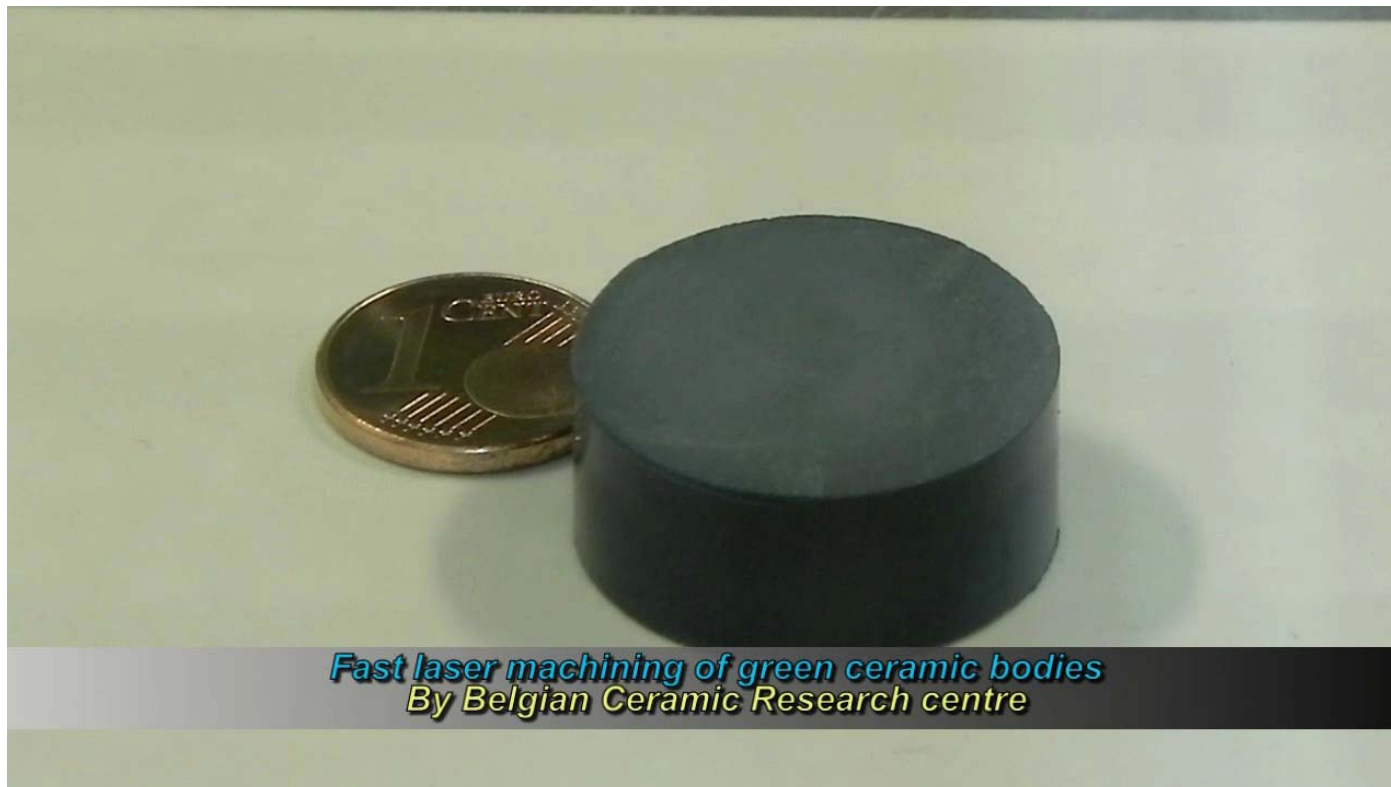
Project coordinator	
Other applicants	
Sector	Micro-manufacturing, biomedical,...
Call of Interest	<input type="checkbox"/> CORNET <input type="checkbox"/> EraSME
Proposal summary:	Our research centre proposes its cooperation for projects which may require complex ceramic $\mu$ -machining or selective surface coatings deposited by laser
Advantages for SMEs, trade or industry:	New laser treatments with high efficiency and reasonable operating costs.
Profile of partners sought:	1. Partners seeking technical ceramics with complex shapes 2. Partners seeking highly selective surface coatings (anti-wear/corrosion, thermal barrier, electroconductive,...)



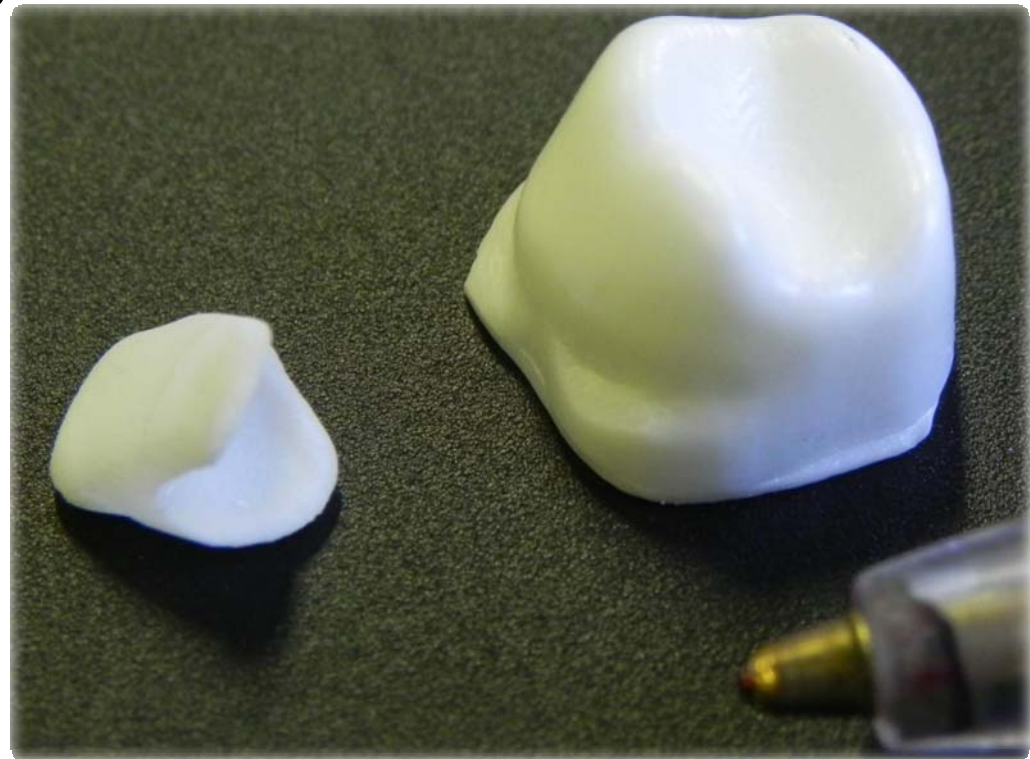
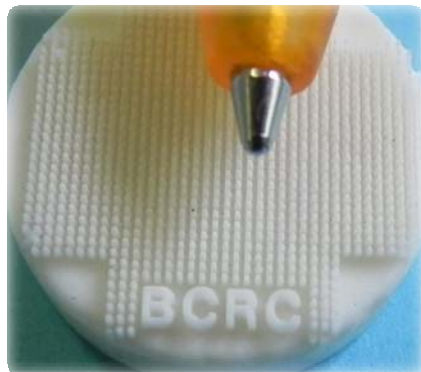
What technology and/or application field is addressed?

COOPERATION OFFERS : 2 technologies

- Ultrafast laser  $\mu$ -machining of technical ceramics
- 2 steps highly selective laser cladding



## Ultrafast laser $\mu$ -machining of ceramics



8 min 30 s to process the big crown

Less than 4 min to fabricate the small one



## Ultrafast laser $\mu$ -machining of ceramics



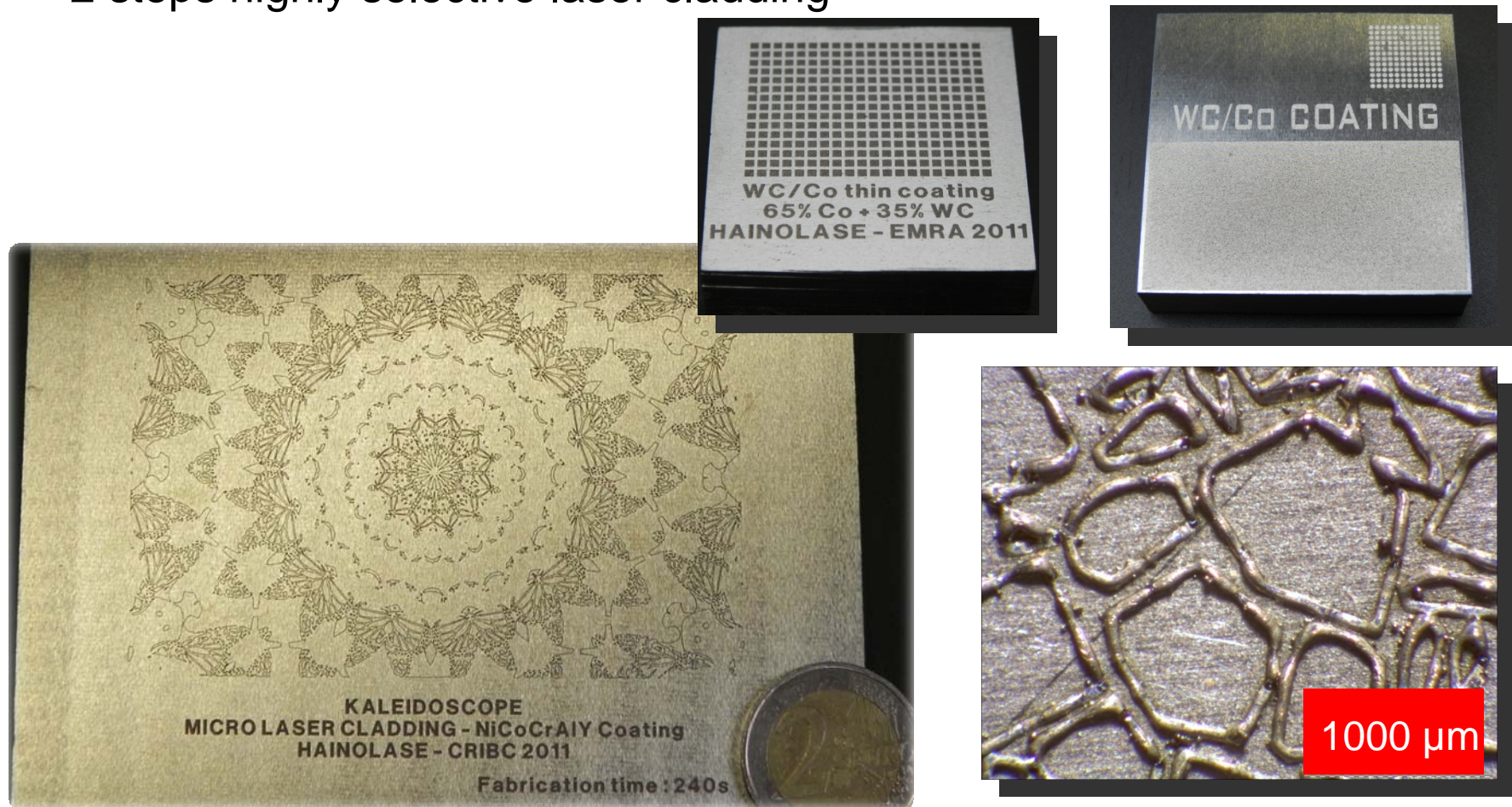
**Venus de Milo :**

Machining time : 40 min

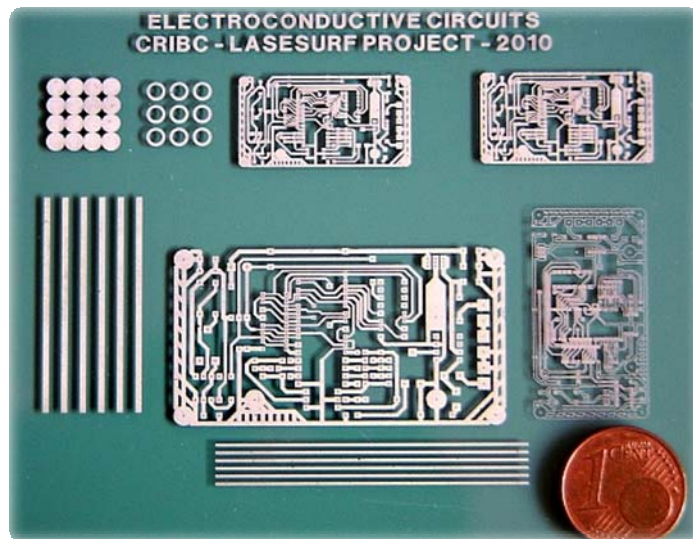
Dimensions : H=55 mm, P = 20 mm



## 2 steps highly selective laser cladding



## 2 steps highly selective laser cladding





These transversal technologies may be applied on :

- Forming technology for ceramics
- precision and micro-manufacturing
- medical technology
- rapid prototyping
- surface treatment of metal parts
- surface and materials technology,

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