



The Royal Canadian Mint Laser applications

- *Presented at EPIC Micro Machining 2021*

May 17, 2021

Xianyao Li, Chief Technology Officer

Minting Tomorrow's Coins Today

THE ROYAL CANADIAN MINT



Ottawa Facility



Production of numismatic and collectible coins, bullion coins, medals and medallions, as well as gold refinery

Winnipeg Facility



Production of domestic and foreign coinage
Electroplating coinage material facilities

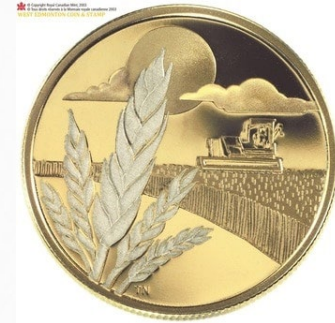
- Commercial Crown Corporation
- Founded in 1908, over 1200 staff
- Leader in Innovation and Technology in Minting Industry

LASER APPLICATIONS AT RCM



- Applications on coins

- Black gold coin technique
- Grey shade coin technique
- Photonic color coin



- Application on special dies and stamping

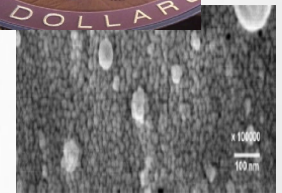
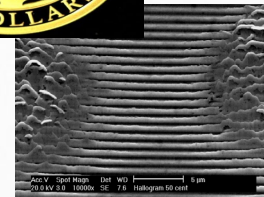
- Holographic coin, 2D/3D, layered,

- Application for coining die production

- Die engraving, die frosting, relief details

- Application for security features

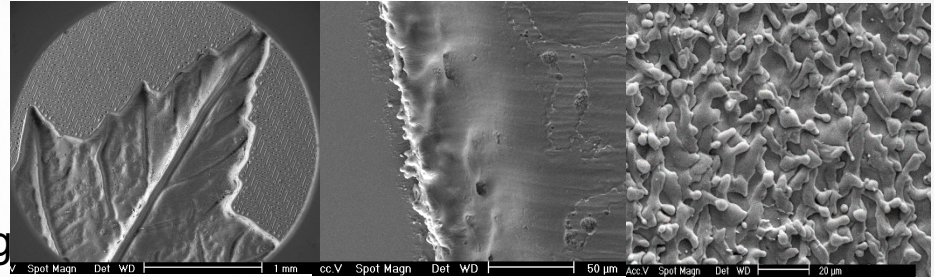
- Micro engraving, hidden micro text,
- DNA security technology



WHAT WE ARE LOOKING FOR



- Improved surface quality
 - Smooth and clean surface
 - Suitable for subsequent processing
 - Minimal oxides
- Advanced special features
 - Dynamic and animation, grey scale or color
 - Multiply channel images or optical effects
- Advanced security features
 - Overt and covert
- Advance surface properties
 - Physical and chemical conditions
 - To enhance metal/precious metal performance





THANK YOU

