



1,2,3 Maros HALAMA, 4Malgorzata MAKOWSKA-JANUSIK, 5Emily HALUSCHAK,
2Michal IVOR

¹Technická Univerzita v Košiciach, Fakulta materiálov, metalurgie a recyklácie, Ústav materiálov a inžinierstva kvality, Košice, SK

²Národné výskumné centrum pre pokročilé materiály a technológie Promatech pri SAV, Košice, SK

³UVP Technicom, spin-off CorOne s.r.o, Košice, SK

⁴Jan Dlugosz University of Czestochowa Faculty of Mathematics and Natural Sciences, Institute of Physics, Czestochowa, POL

⁵Purdue University, School of Chemical Engineering, West Lafayette, IN, USA

THERMODYNAMIC
REDOX
CORROSION
LIFE-TIME

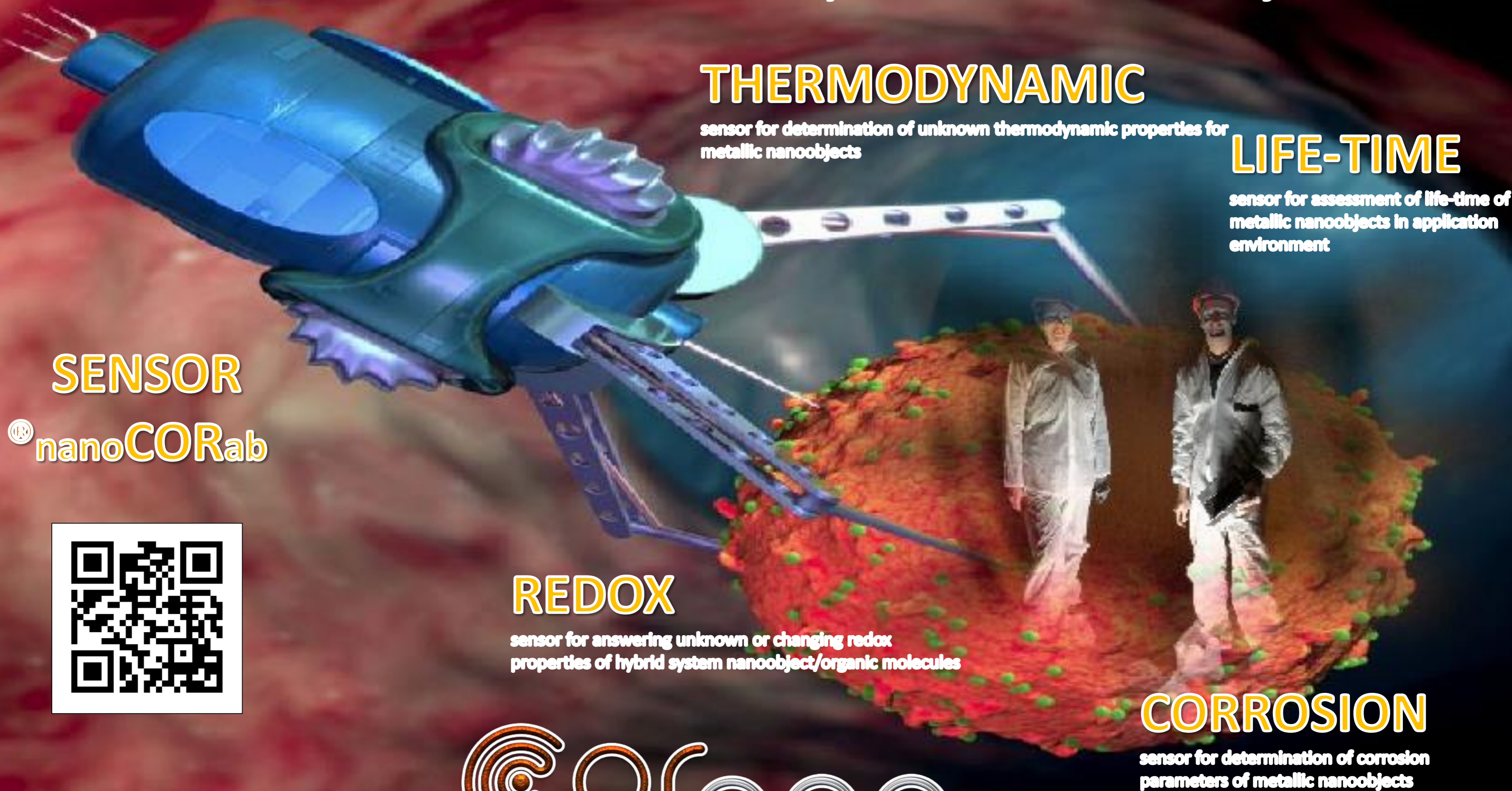
® nanoCORab



EU-Japan Centre
for Industrial Cooperation
日欧産業協カセンター

Discover unknown properties of
nanoobjects by our technology!

Sensor for assessment of safety of metallic nanoobjects



THERMODYNAMIC

sensor for determination of unknown thermodynamic properties for metallic nanoobjects

LIFE-TIME

sensor for assessment of life-time of metallic nanoobjects in application environment

SENSOR

® nanoCORab



REDOX

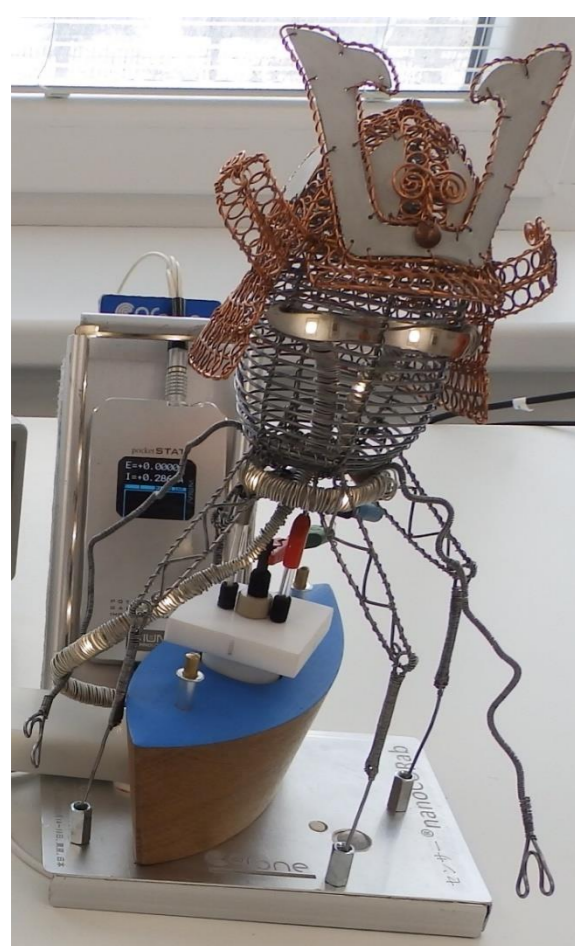
sensor for answering unknown or changing redox properties of hybrid system nanoobject/organic molecules

CORROSION

sensor for determination of corrosion parameters of metallic nanoobjects

Corone

WWW.CORONE.SK



○ An unique sensor for detection of safety of metallic nanoobjects has been verified by realisation of electrochemical measurements and quantum chemical calculations of Ag nanoparticles and Ag nanoparticles/ascorbic acid hybrid system.

○ It served for assessment of unknown thermodynamic, redox and corrosion properties of metallic nanoobjects in application environment, run-off effect, release of nanoobjects into environment. Sensor is hidden inside wooden „Corab“ motivated by Noem Arch.

Designed by National Artist in Industrial Design **prof. Tibor Uhrin**

○ Nanorobot with Samurai helmet as functional design serve as Faraday cage. Made by unique technique called wire-craft, which is a specific traditional technique in Slovakia, with no similarity in rest of world.

Designed by Artist **Blazena Krivakova**

○ Sensor has been introduced at SETCOR conference in World Trade Centre in Dubai, at Nanotech 2018 Expo in Tokyo and At M3 conference in Singapore.