Welcome to Korean-Czech joint R&D call for proposals 2021 webinar (KIAT/TA CR)

The webinar starts at 09:30 (CET) /16:30 (KST).

Please turn off your microphone. 

The meeting will be recorded and shared online, if you do not wish to be seen turn off your camera.  It also helps with the data transmission.

If you have a question, raise your hand  and wait to be called on.

Or simply use the chatbox  to write down your question.

Korean-Czech joint R&D call for proposals 2021 webinar (TA CR/KIAT)

31. 3. 2021

Ms. Tana Halova Perglova - The Technology Agency of the Czech Republic (TA CR)

Ms. Eva Pentel - The Technology Agency of the Czech Republic (TA CR)

Mr. Felix Hongyeol Choi - The Korea Institute for Advancement of Technology (KIAT)

Mr. Wonseok Shin - The Korea Institute for Advancement of Technology (KIAT)

Agenda

- Welcome and introduction (5 min)
- Presentation of specific requirements for joined call for proposals (20 min)
- Presentation of two completed projects - example of good practice (20 min)
- Presentation of matchmaking tools (5 min)
- Pitch presentations (10 min)
- Questions & answers (30 min)

WELCOME & INTRODUCTION

Technology Agency of the Czech Republic (TA CR)

About TA CR

- We are an organisational unit of the state and the administrator of a budget chapter.
- We prepare and manage state funding programmes whose purpose is to stimulate the interconnection of organisations working on applied research with innovative activities in business and in the state administration.
- We develop new tools to support closer collaboration between academia, the business sector and the state administration both nationally and internationally.

TA CR **in numbers** (data as of 31 December 2020)

Over the past 12 years, we have been able to support over 3 200 Czech ideas that help change the world for the better.

40

CZK BILLION

has been invested by the state in applied research through TA CR

3 262

FUNDED PROJECTS*

3 775

BUSINESS PROJECT PARTICIPANTS SUPPORTED*

4 393

RESEARCH ORGANISATION PROJECT PARTICIPANTS SUPPORTED*

69 %

AVERAGE FUNDING INTENSITY*

17

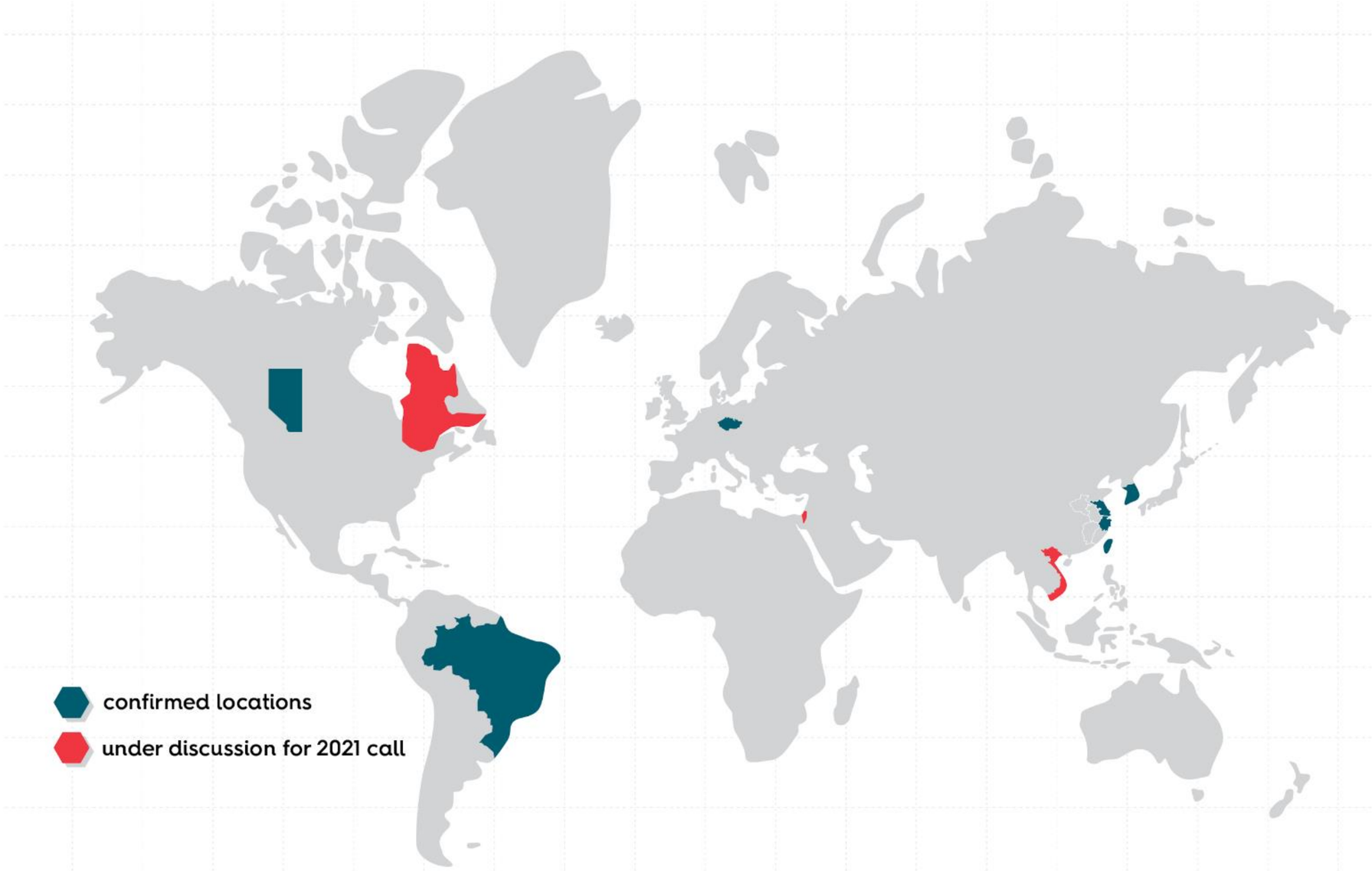
PROGRAMMES

Including projects which are in process of signing a contract.

** In TA CR Calls for proposals.*

BILATERAL COOPERATION
DELTA 2, 3rd joined call

Bilateral cooperation in 2021



KOREAN-CZECH JOINT CALL FOR PROPOSAL

overview

TA CR - KIAT overview

Main applicant

An enterprise

Other participants

Enterprises

Research organizations or Universities

Linked and partner enterprises

Are allowed to participate

Project length

12 - 36 months

Areas of research TA CR & KIAT

Priority areas of cooperation mutual for TA CR & KIAT:

1. **Green car and automobile parts;**
2. **General machinery;**
3. **Electronics/electrical engineering;**
4. **ICT (including cybersecurity);**
5. **Artificial intelligence (AI);**
6. **Robotics and cybernetics;**

Project proposals from other areas are also welcomed!

TA CR does not support defence and medical research!

BASIC CRITERIA - TA CR

Preliminary schedule TA CR

3rd Joint Call for Proposals	
Launch of the call	12 May
Project submission	13 May - 14 July
Evaluation period	15 July - 29 November
Results' announcement	by November 30
Start of projects	TA ČR: between 1 January and 30 March 2022

FUNDING SCHEME

Funding scheme - TA CR (DELTA 2 Programme)

Total expenditure: 300 mil. CZK (approx. 13,4 mil USD)

Funding intensity: up to 74%

Maximum amount per project: not set

The TA CR and the KIAT will fund the respective nationals in the selected consortia in accordance with their national funding rules.

Funding scheme - TA CR (Delta 2 Programme)

- Total expenditure: 300 mil. CZK (13,4 mil. USD)
- Maximum amount of funding per project: not set
- Maximum funding intensity per project: up to 74%

	Industrial research		Experimental development	
Type of applicant	Max. allowable aid intensity	Max. allowable aid intensity with demonstrated effective collaboration with a research org.	Max. allowable aid intensity	Max. allowable aid intensity with demonstrated effective collaboration with a research org.
Small enterprises	70%	80%	45%	60%
Medium enterprises	60%	75%	35%	50%
Large enterprises	50%	65%	25%	40%
Research org.	100%	-	100%	-

The aid intensity (%) of a project is the ratio of funding amount to the total eligible project costs.
The aid intensity (%) of an applicant or project partner is the ratio of the amount of its funding to its total eligible costs.

APPLICATION & EVALUATION PROCESS

Submission process

Submission of the project proposal via ISTA (an electronic system)

www.ista.tacr.cz

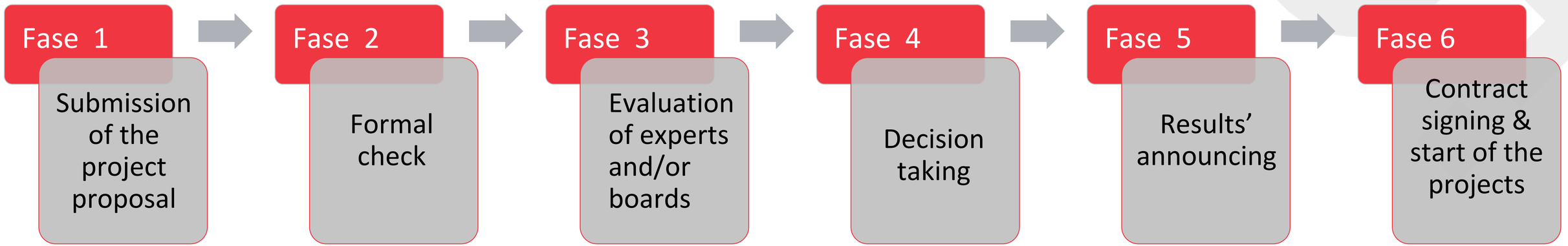
Compulsory annexes:

- **Sworn statement of the applicant;**
- **Common proposal;**
- **Annexes connected to project results;**

Submission deadline: by 14. 7. 2021

Submission & evaluation process

. . . . . .



The application must be approved by both - the TA CR and KIAT in order to receive funding!

KIAT International Bilateral R&D programme and Joint call conditions

2021

KOR-CZE JOINT CALL ONLINE WEBINAR

2021. 03. 31

Ministry of Trade, Industry and Energy

beyond leading technology KIAT

Contents

1. Introduction of KIAT
2. Qualification
3. Funding
4. Evaluation Criteria
5. How to Apply

01 Introduction of KIAT

01 Introduction of KIAT

1 Purpose

- To promote industrial technology innovation
- To support the development of industrial technology policy

2 Function

- Support the Open Innovation of Korean R&D Entities Through Global Technological Cooperation

Bilateral Cooperation

Support bilateral technology development

Spain	Switzerland
Czech Republic	Canada
China	Israel
Germany	France
Singapore	UK
India	Russia

Multilateral Cooperation

Support participation in EU R&D projects

- EUREKA
- EUROSTAR2
- Horizon 2020

Infrastructure Establishment

Networking events, global network

- Agreements and events
  - GT
  - EEN & GCC
  - GT DAY
  - KOREA EUREKA DAY

02 Qualification

1 Qualification

- All types of companies (large enterprise; SME), university or research institute are able to apply

  However, a company (private enterprise) must be a leading organization in Korean consortium

- Project Participating Company should be in operation for more than a year, and have a certificate of corporate R&D center issued by the Korean government

2 Restriction

- The project should not have already been implemented and should not overlap with other ongoing publicly funded R&D projects (Redundancy review)
- Korean organizations, the chiefs, and the persons responsible should not be restricted from National R&D program by the end of the application date
- The participating company should be Financially Solvent
- The number of national R&D projects that the participating researchers are simultaneously executing cannot exceed 5

2 Restriction

- If the number of MOTIE R&D projects conducted by a Korean Lead company at the same time by the submission deadline date is higher than the number in the table below, the application is restricted.

Type of Korean Lead	Normal Enterprise	Marginal Enterprise*
Medium sized Enterprise	5	4
Small sized Enterprise	3	2

* Marginal Enterprise is an entity with an interest coverage ratio of less than 1 in its financial statements at the end of the last three consecutive fiscal years.

- ETC

03 Funding

1 Funding

A Project Budget

- Total Project Cost = Public Funding + Private Cost(Cash, In-Kind)

B Public Funding Ratio

Type	2021 (COVID-19 Special Guidelines)	After 2022(TBC)
Large Enterprise	33% or less of the Project cost of Participating enterprise	
Medium sized Enterprise	65% or less of the Project cost of Participating enterprise	50% or less of the Project cost of Participating enterprise
Small sized Enterprise	80% or less of the Project cost of Participating enterprise	67% or less of the Project cost of Participating enterprise
Others (Univ, Research institutes)	100% or less of the Project cost of Participating enterprise	

1 Funding

C Cash ratio of private matching funds (civilian dues)

Type	2021 (COVID-19 Special Guidelines)	After 2022(TBC)
Large Enterprise	60% or more of the Private Contribution of Participating enterprise	
Medium sized Enterprise	10% or more of the Private Contribution of Participating enterprise	50% or more of the Private Contribution of Participating enterprise
Small sized Enterprise	10% or more of the Private Contribution of Participating enterprise	40% or more of the Private Contribution of Participating enterprise
Others (Univ, Research institutes)	Paid if necessary	

04 Evaluation Criteria

1 Criteria

A Evaluation Score

Technological Capacity (25)	Feasible Project Planning, Importance & Creativeness of the target technology, Possibilities to achieve project goals
R&D Capabilities (25)	Infrastructure of each participants Each participant's specific R&D role
Marketability (40)	Possibility of successful commercialization
International Cooperation Strategy (10)	Necessity and effectiveness of international cooperation

- Project with a total score of 70 or more is eligible for funding

However, projects with a total score of 70 or may also be excluded according to the evaluation results of TACR and the budget situation.

1 Criteria

B **Disadvantages with insufficient international cooperation, such as:**

- Simple tasks of Czech Republic institutions

- When it is possible to find cooperative partners of the same technology level in Korea;

  However, it excludes cases where foreign partners play a decisive role in entering overseas markets.

C **No more value on projects of target technology areas**

- KIAT just gives extra 2 points to the projects of target technology area

05 How to Apply

1 Process

- Applications must be made to KIAT for Korean institutions and TACR for Czech Republic institutions to be accepted.

[2021 KOR-CZE Joint Call Procedure]

Application		Evaluation	Notification	Project Start Date
Start Date	Close Date			
‘21.05.13	’21.7.14	’21.7~11	’21.11	’21.12

2 How to Apply

- Proposal and other documents received Online

  (No offline submission required)

- Online Submission : www.k-pass.kr

※ The submission deadline may be delayed due to server congestion, so the submission must be done in advance. Also, the application is not registered after the deadline for application.

3 Contact

Contact

- **KIAT** (www.kiat.or.kr)

- **Won Seok Shin** : a Researcher of International R&D Cooperation Team

Email : wsshin1204@kiat.or.kr

Tel : +82-2-6009-3208

- **EdResearch Co.,Ltd** (www.edresearch.co.kr)

- **Sue Kim** : a Senior Researcher of Global Biz. Department

Email : sj.kim@edresearch.co.kr

Tel : +82-2-3016-5404

Thank you

beyond leading technology KIAT
한국산업기술진흥원

SUCCESSFULL COMPLETED PROJECTS

Show case 1

Representative:

Mr. Ing. Martin Smrz, Ph.D.

Organisation:

Institute of Physics of the Czech Academy of Sciences

Project name:

Ho:YAG thin disk laser applications

SUPERLASERS FOR THE REAL WORLD

Application of Ho:YAG laser

Martin Smrž

hilase

EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání

MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 739573 (HiLASE CoE)

FZÚ

Project: Applications of Ho:YAG thin-disk laser

- Project participants:
  - 2 research institutes - **KETI, HiLASE (FZÚ)**
  - 2 companies: **Profiber, Axel**
- Subcontractor: Optonics
- Identified customer: Wontech
- Project duration: **3 years** (2016-2019)
- Coordinator: **HiLASE**
- Field: **Optics and lasers**
- Total costs on czech side: **13.562 mil. CZK** (0.5 mil. €)
- Public support: **10.036 mil. CZK** (0.38 mil. €)

Czech participants

HiLASE:

- Research centre of Institute of Physics
- Established 2012
- 100 employees
- Focus on technology transfer, laser development, and laser applications in a field of industrial lasers
- Expertise in high power solid-state pulsed lasers, nonlinear optics, material processing, etc.

Profiber:

- Established 2007
- Focus on fiber optics, fiber lasers, communication networks
- Delivery of equipment for optical fibers
- ISO 17025:2017 approved calibration laboratory

Korean participants

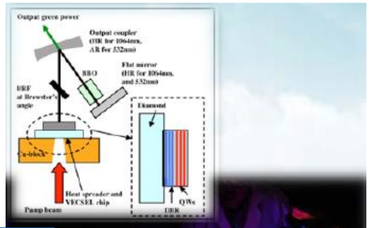
Axel

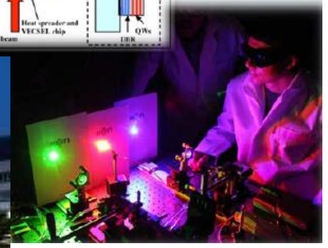
- Established 2012 in Gyeongnam
- Single crystal growing company
- Vendor of many world laser producers
- Focus on components for medical lasers

KETI

- Established 1991
- Focus on sensors, optoelectronics, smart technology, automotive
- Leader in advanced electronics and IT

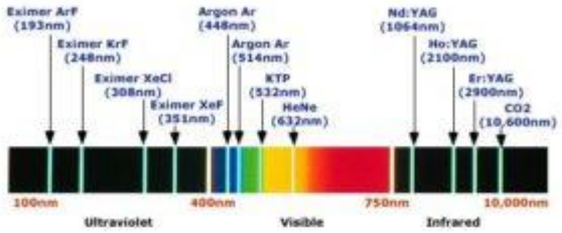
KETI Korea Electronics Technology Institute 전자부품연구원

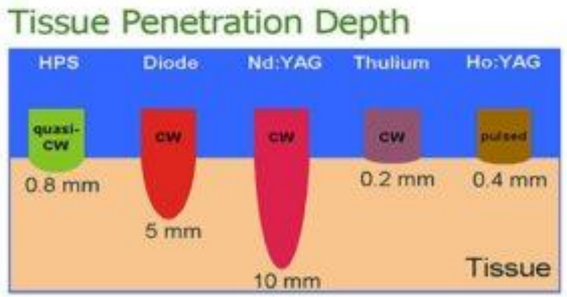


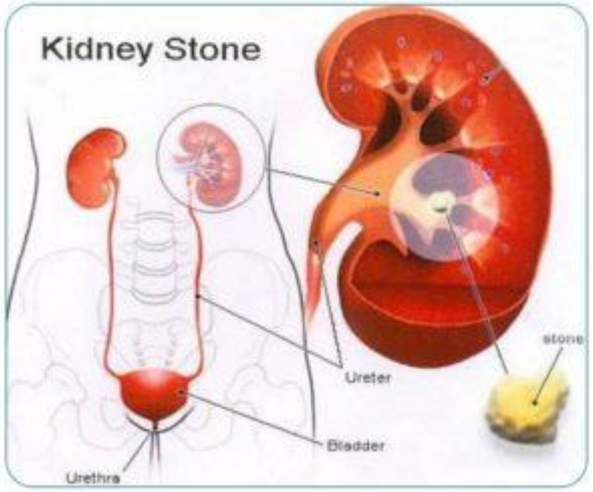


Project motivation

- Ho:YAG – emission band 2.1 um
- Potential to generate short pulses (ps, fs)
- High absorption in water
- Low penetration depth in tissues

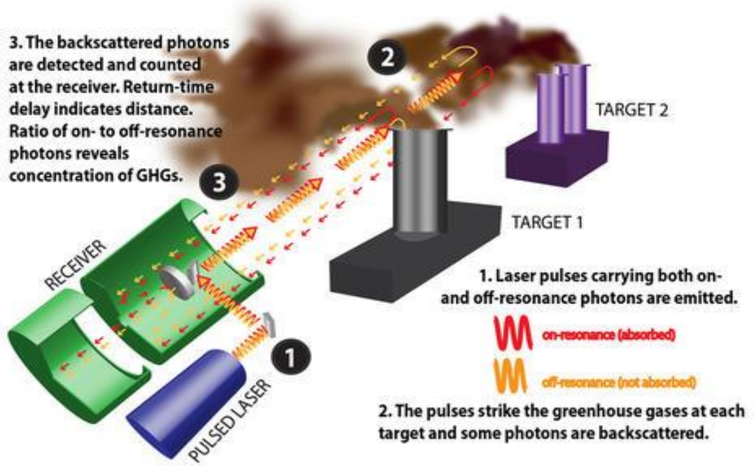


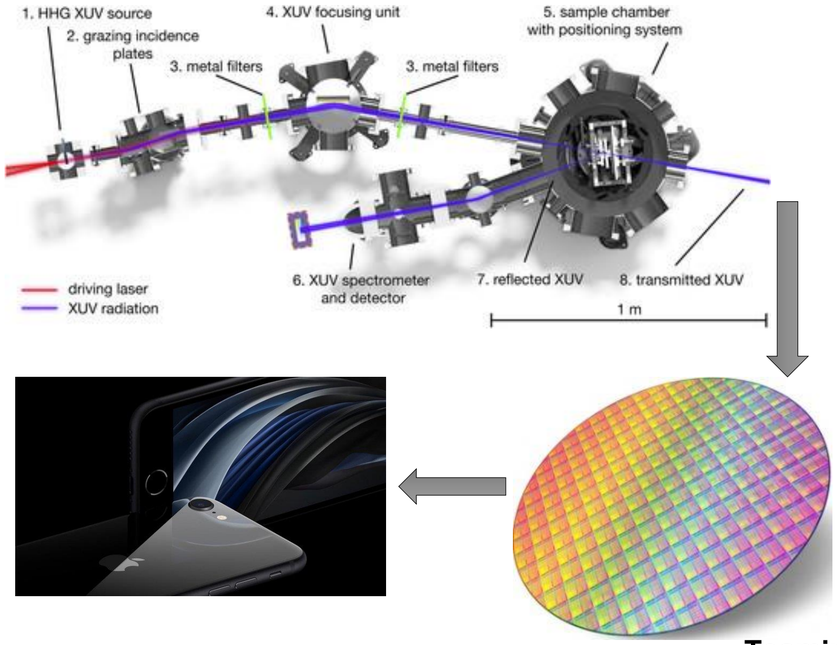




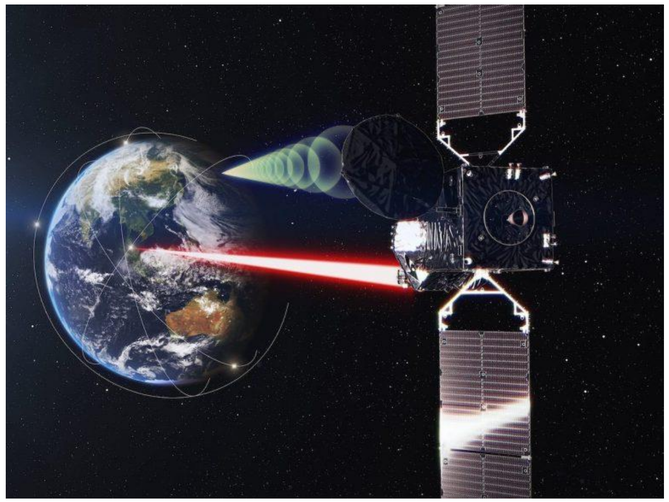
- Excellent for surgery (spinal, urology)
- Low bleeding
- Kidney stones treatment

Other applications

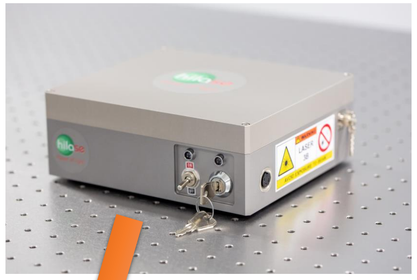


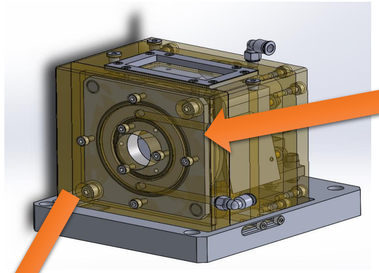


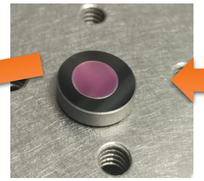
- LIDAR – measurement of concentration of gasses
- Pump source for extreme UV and X-ray light sources
- Secure communication with satellites

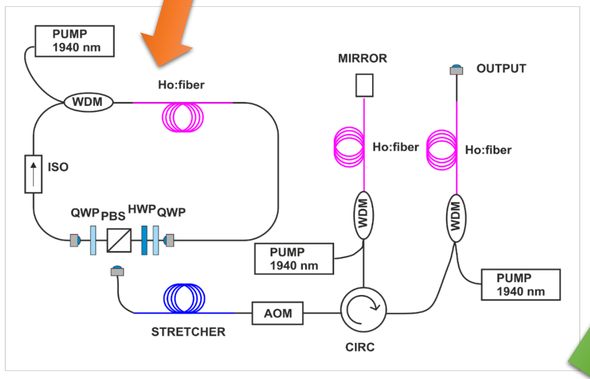


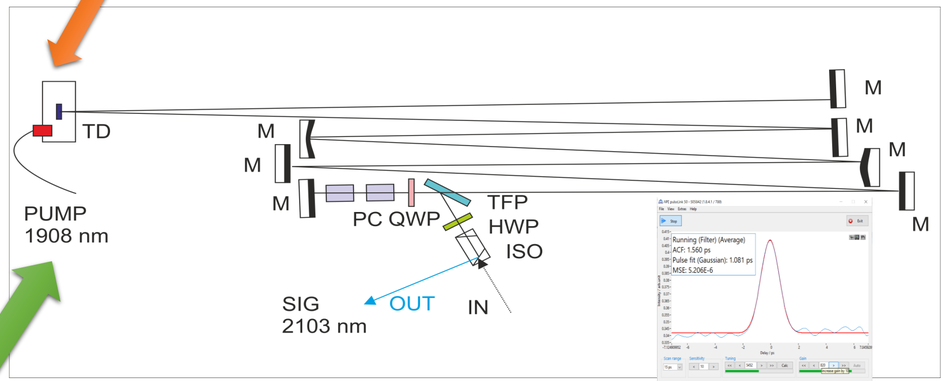
Project results

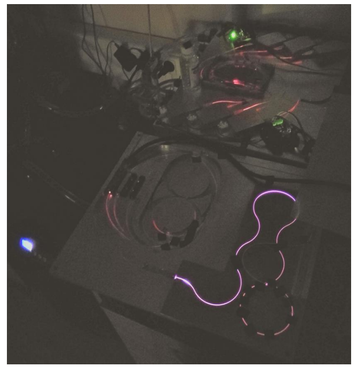












Laboratory demonstrators of:

- Ho:YAG fs fiber oscillator followed by Ho fiber preamplifier
- Ho:YAG thin disk laser amplifier (ps pulses, 10 kHz repetition rate)
- Tm-doped fiber laser (100 W)

Proejct realization and implementation

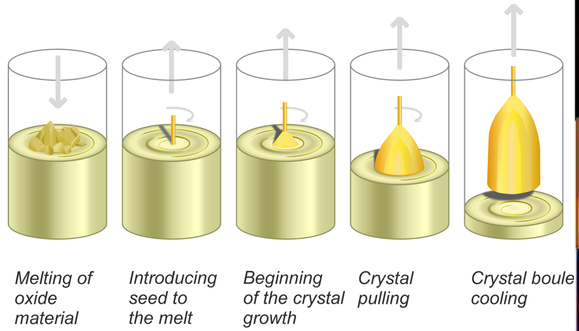
- Contribution of participants:
  - Profiber – construction of Tm-doped fiber laser, metrology of laser radiation
  - Hilase – construction of optical parts of picosecond oscillator, preamplifier, main amplifier, and laser head
  - Axel – growing of Ho-doped single crystals, cutting and polishing of thin Ho:YAG disks (400 um), optical coatings (with Optonics)
  - Keti – assistance with integration of the system, specialist on technology transfer

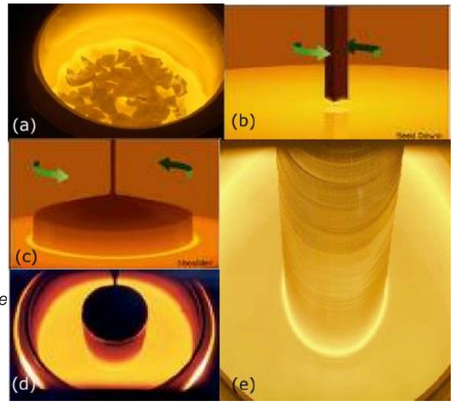
- 3 functional samples submitted on Czech side:
  - High power Tm-doped fiber laser
  - Laser head for thin-disk laser
  - Picosecond thin disk laser system

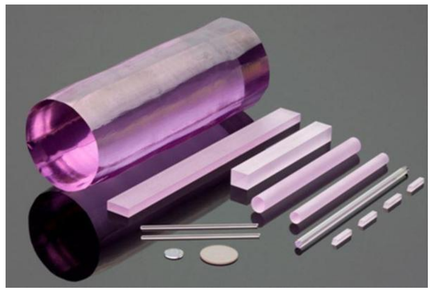
- Axel successfully developed technology for Ho:YAG growing
- Implementation continues with next increase of technical readiness level
- Wontech interested in clinical study of the developed laser system in Czechia

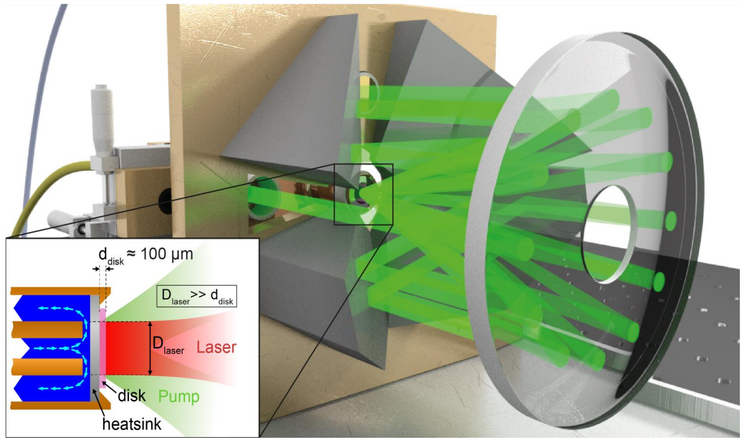
Project results 2

- Crystal grow by Czochralski method
- Cutting to small disk
- Polishing to high optical flatness and surface roughness
- Coating by highly reflective or antireflective coatings
- Funding for Axel 900 mil. wons









Experience from the project

- Collaboration was smooth thanks to good knowledge of South Korea
- At least one visit per year is very productive, boosting of personal relationships positive for the project – limited in pandemy
- Problem was in different timing of deadlines on Korean and Czech side
- Grant agencies do not accept reports in English even in these international projects – everything must be translated from language of communication with your partner
- The project initiated folowing collaboration with Optonics and other korean companies
- Delta projects in general are a good chance for local business – currently we have a running CZ-Korea project with Optonics and consider a next one (plus several others with different countries)

SUPERLASERS FOR THE REAL WORLD

THANK YOU!

HiLASE Centre
Institute of Physics of the CAS
Za Radnicí 828
25241 Dolní Břežany
Czech Republic
www.hilase.cz

EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání

MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 739573 (HiLASE CoE)

Show case 2

Representatives:	Organisations
Mr. Mgr. Martin Cada Ph.D.;	Institute of Physics of the Czech Academy of Sciences;
Mr. Ing. Jaroslav Dolak	SVCS Process Innovation s.r.o.;
Mr. Hyungsang Park Ph.D.	ISAC Research;

Research and development of a new plasma-activated ALD system with a unique source of low-temperature plasma based on microwave surfatron and ECWR discharge

New plasma-activated ALD system

based on low-temperature microwave surfatron and ECWR discharge

Ing. Jaroslav Dolák, Martin Čada, Ph.D.

Project partners

Leading organisations

SVCS

iSAC RESEARCH

Participating organisations

FZU
Institute of Physics of the Czech Academy of Sciences

KIMS 재료연구소
Korea Institute of Materials Science

KOREA MARITIME AND OCEAN UNIVERSITY
1945
한국해양대학교

Strengths of partners

FZU
Institute of Physics of the
Czech Academy of Sciences

Dept. of Low-temperature Plasma is highly-reputed in:

- plasma diagnostics methods
- new plasma source development
- sputtering (HiPIMS, hollow cathode)
- atmospheric plasma

SVCS

Leading manufacturer:

- horizontal/vertical diffusion furnaces
- furnaces for LPCVD, PECVD
- gas/liquid delivery systems
- precursor temperature control system
- hardware and software control system

Strengths of partners

Manufacturer:

- ALD equipment
- PEALD equipment
- providing coating process
- development and optimisation of ALD processes

Research organisation providing:

- development of nanostructured surfaces
- advanced characterisation of surface
- growth of thin films
- 2D material fabrication
- solar cell materials

Financial support

T A

Č R

Technology
Agency
of the Czech Republic

Program Delta

beyond leading technology

KIAT

- Period: 11/2016 - 10/2019
- Total costs: $2.2M

SVCS

FZU Fyzikální ústav Akademie věd České republiky

Aim of the project

Design of low-temperature plasma source, which can be incorporated into ALD proces chamber

Explore possibility to deposit thin films with required properties at lower substrate temperatures.

Development of 300 mm plasma based Atomic Layer Deposition equipment

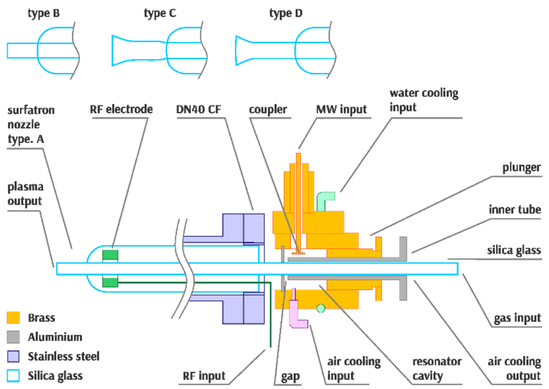
Develop suitable plasma source to be sufficiently homogeneous & active (enough radicals and charged particles)

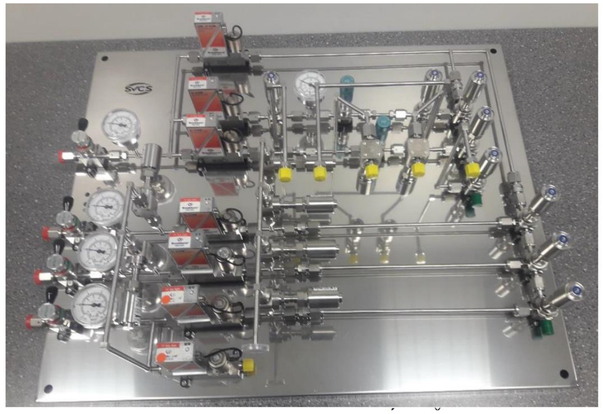
Investigate microwave surface wave sustained plasma – *surfatron* & ECWR plasma

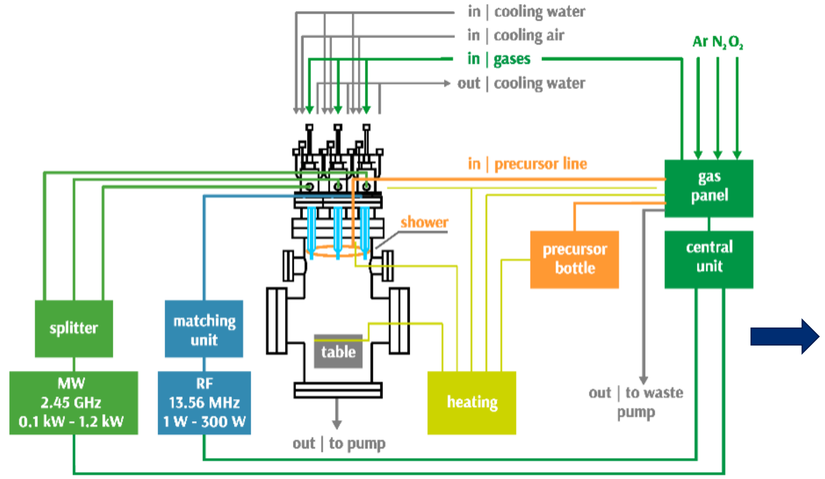
SVCS

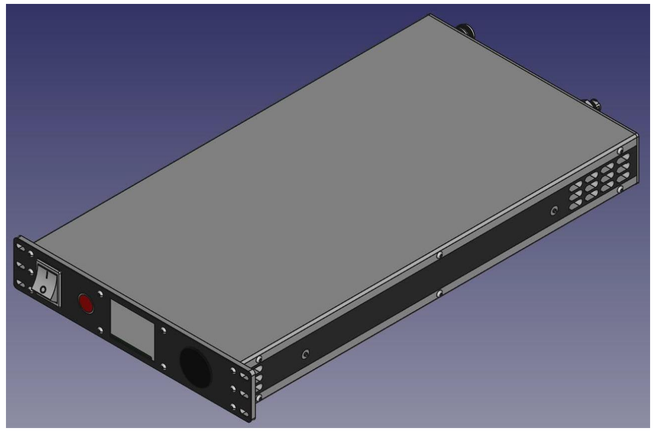
FZU Fyzikální ústav Akademie věd České republiky

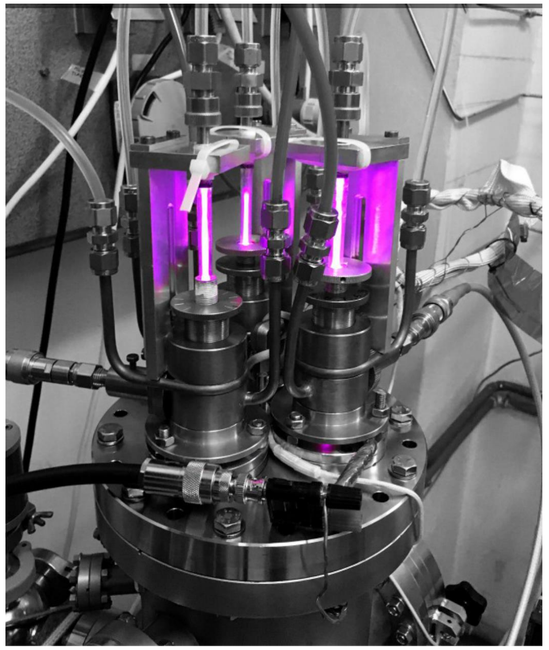
Milestones

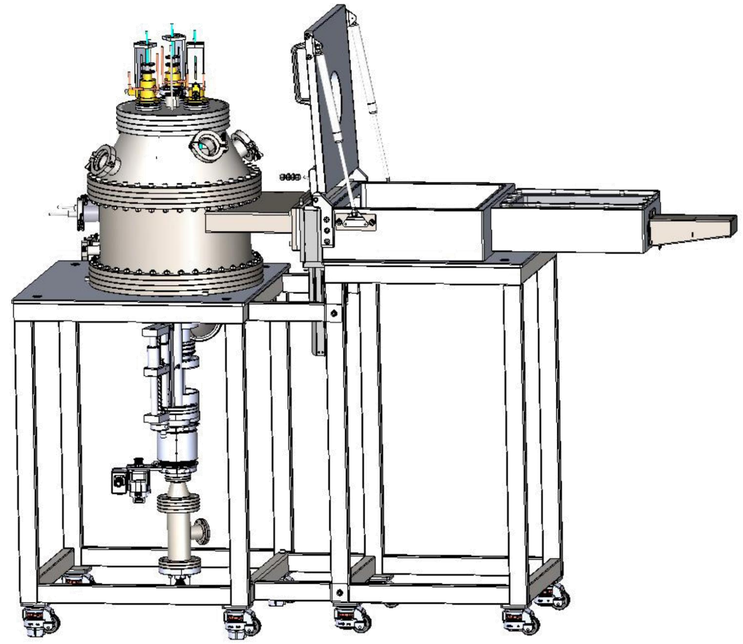

type B
type C
type D
surfatron nozzle type. A
RF electrode
DN40 CF
coupler
MW input
water cooling input
plunger
inner tube
silica glass
gas input
plasma output
Brass
Aluminium
Stainless steel
Silica glass
RF input
gap
air cooling input
resonator cavity
air cooling output




in | cooling water
in | cooling air
in | gases
out | cooling water
Ar N2 O2
in | precursor line
gas panel
shower
precursor bottle
central unit
splitter
matching unit
table
MW 2.45 GHz 0.1 kW - 1.2 kW
RF 13.56 MHz 1 W - 300 W
heating
out | to waste pump
out | to pump







Synergy

- ✓ Plasma sources design
- ✓ Implement plasma sources into lab-scale ALD
- ✓ Tune PEALD

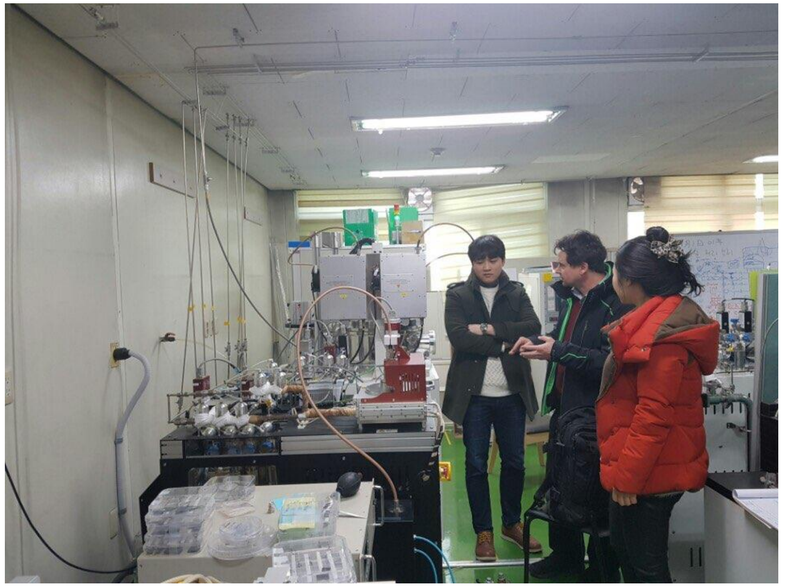
- ✓ Gas delivery system design
- ✓ Industrial-scale chamber design
- ✓ Tune PEALD

- ✓ Assistance with ALD implementation
- ✓ Implement plasma source into existing ALD systems

- ✓ Deposition of thin films
- ✓ Atomic Layer Etching process
- ✓ Analyse of thin films

Co-operation

- Annual meetings
- Technical discussions
- Joint research work



SVCS

FZU Fyzikální ústav Akademie věd České republiky

Thank you for your attention

Korean-Czech Bilateral Co-funding R&D Project

Microwave plasma ALD system

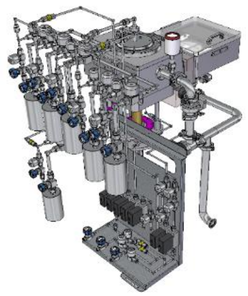
ISAC RESEARCH, INC

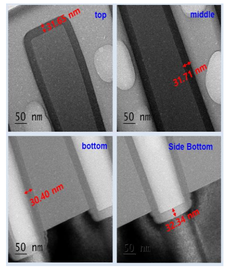
Hyung Sang Park

Partner : SVCS

PIN Institute of Physics

Korea-Czech R&D project

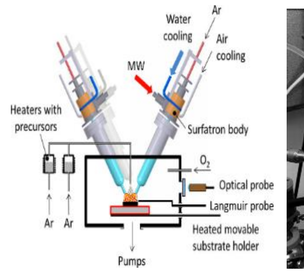


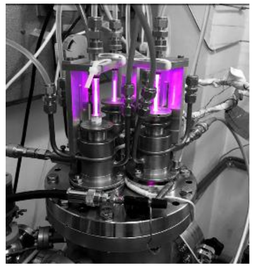


ISAC secured technology
- ALD process control
- Chamber design
- Gas delivery control

SVCS secured technology
- Microwave Surfatron design
- Plasma analysis
- Film evaluation

FZU
Institute of Physics of the Czech Academy of Sciences



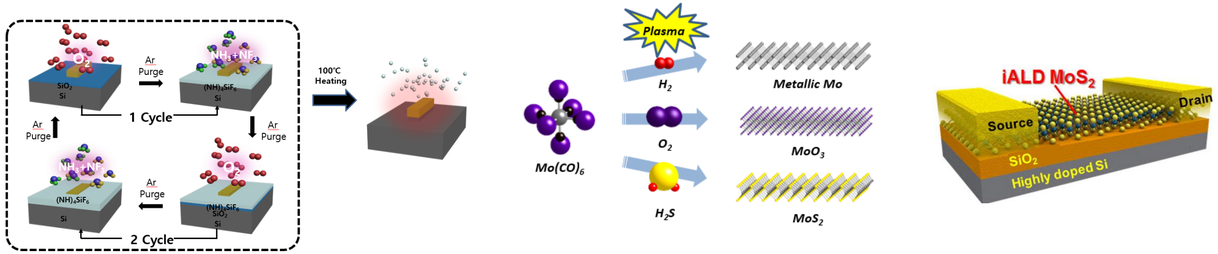


Development of Equipment for ALD/ALEt using High Density Plasma

Development of Variety of New ALD/ALEt Process Technology (Secure key contents for new equipment)

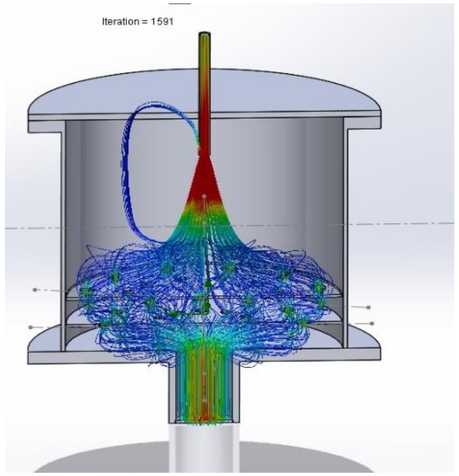
KIMS 재료연구소
Korea Institute of Materials Science

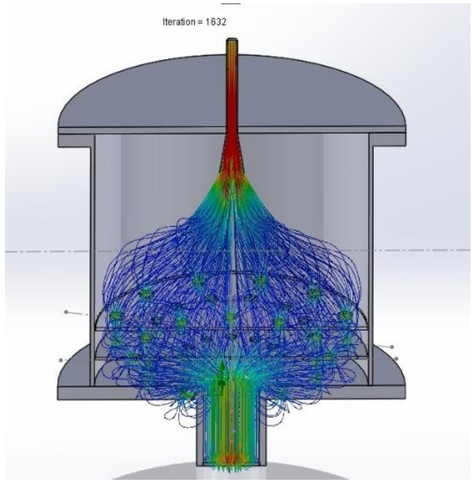
KOREA MARITIME AND OCEAN UNIVERSITY 1945 한국해양대학교

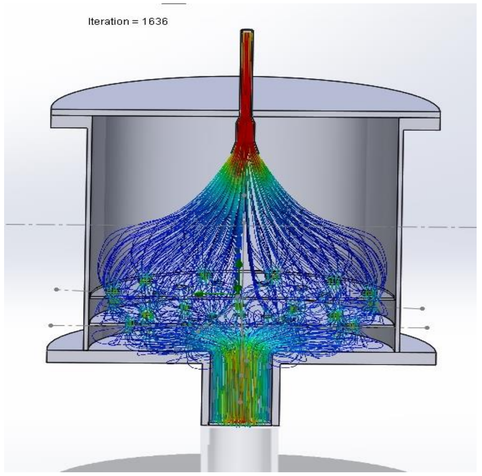


Design of surfatron plasma source

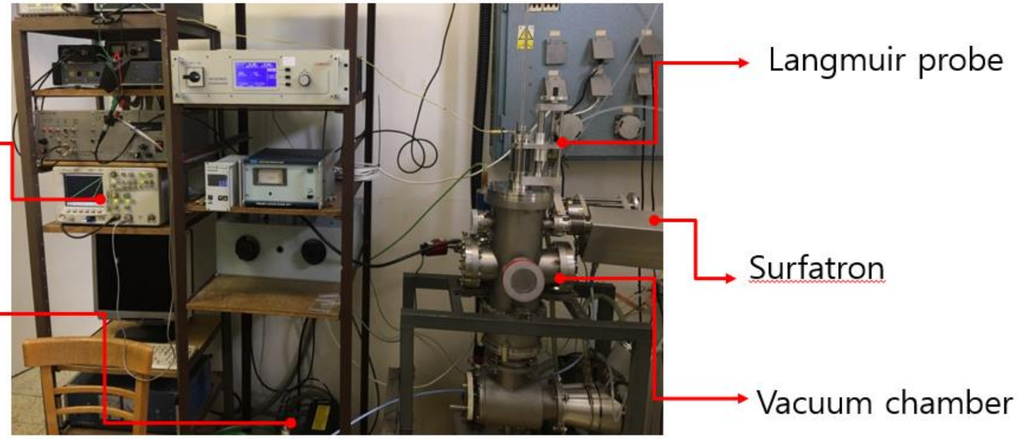
➢ Fluid-dynamic modeling for surfatron nozzle







➢ Plasma parameter extraction for 300 mm reactor

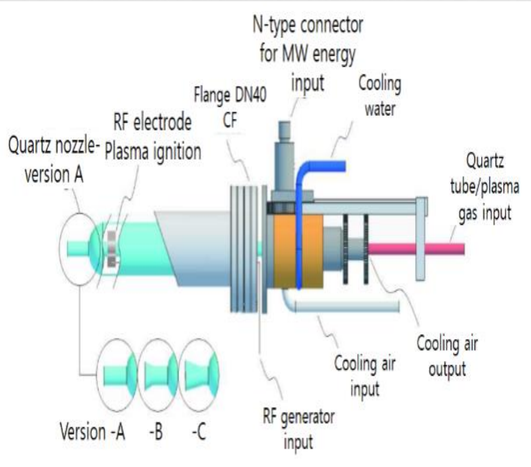


Plasma parameters

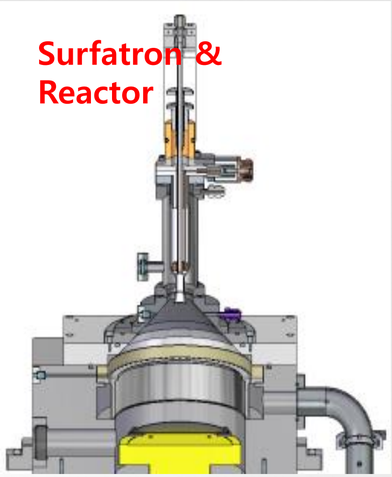
- Electron temperature
- Plasma density
- Plasma potential
- Floating potential

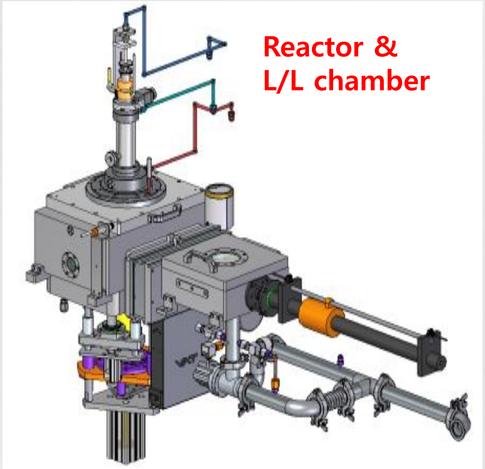
300mm Surfatron plasma ALD

MW Surfatron plasma source from SVCS

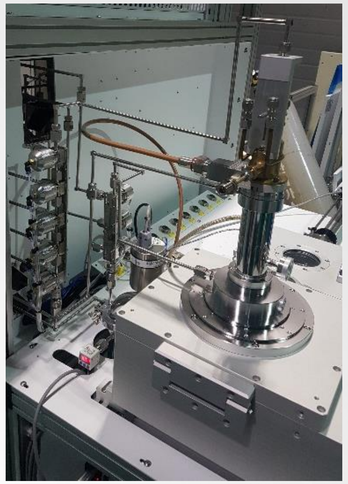


Surfatron with ALD reactor





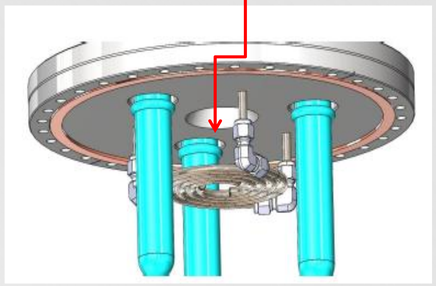
MW plasma ALD SYSTEM

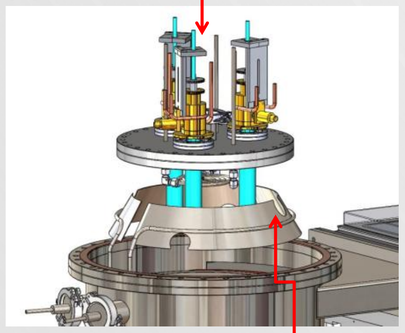


Surfatron/ECWR plasma ALD

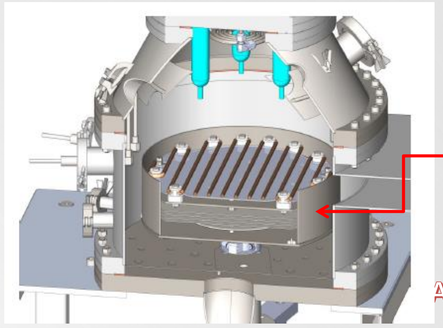
MW plasma source

3 surfatrons & resonators
3 injection showerhead





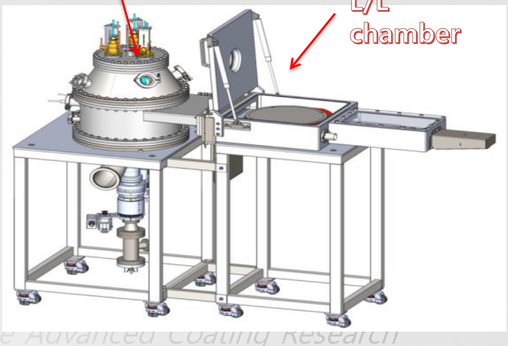
ECWR electrode



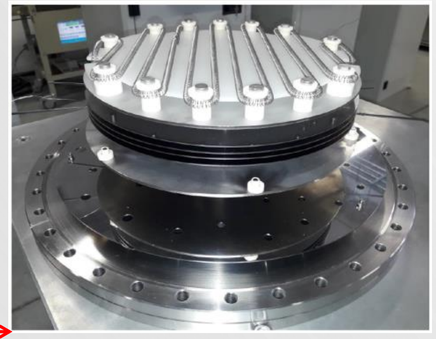
Spiral one-zone heater

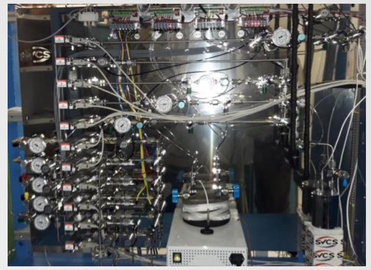
ALD Reactor

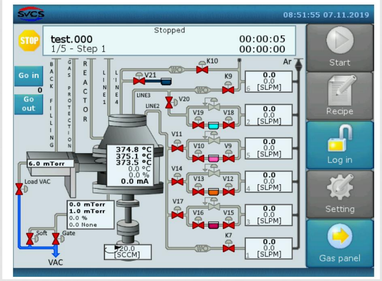
L/L chamber



Surfatron/ECWR plasma ALD SYSMTEM



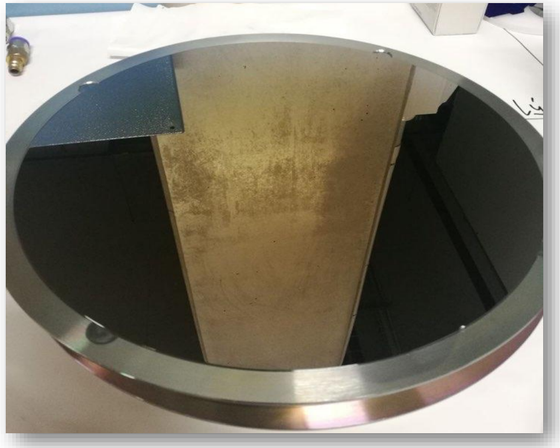


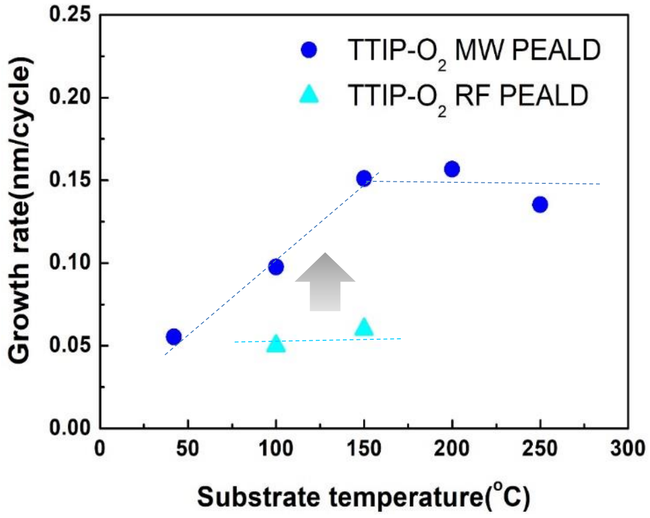


Research progress

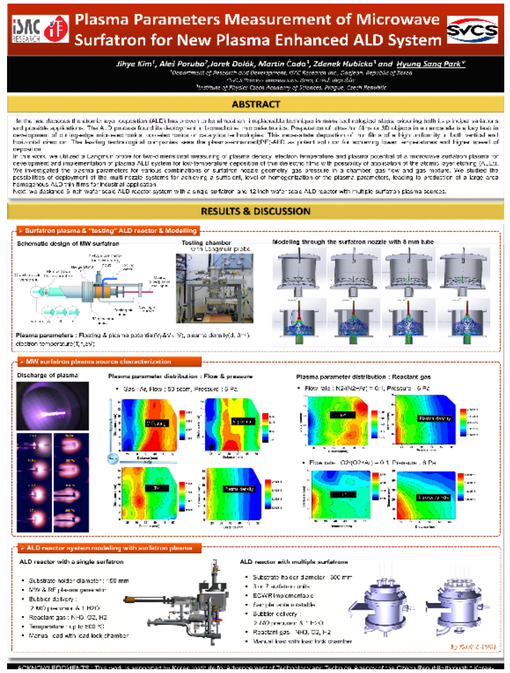
<IPP-SVCS-ISAC>

ALD thin films with MW surfatron @300 mm

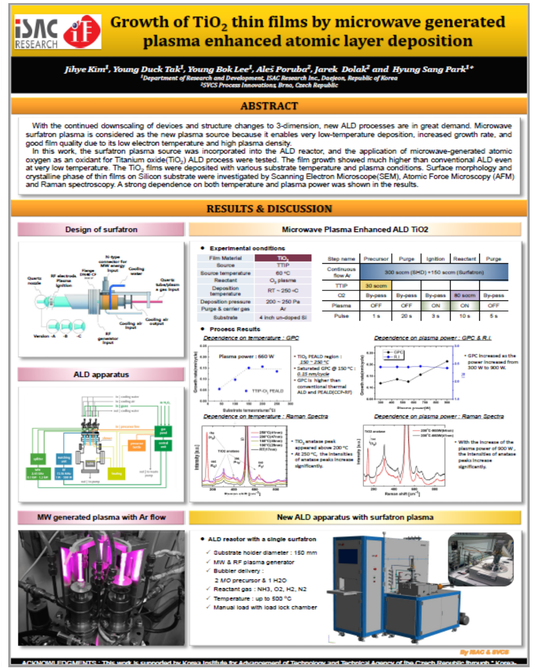




2019 ALD/ALE conference



2020 ALD/ALE conference



2018 16th ICPSE

Plasma parameters measurement of microwave surfatron discharge applied in new Plasma-Enhanced-ALD

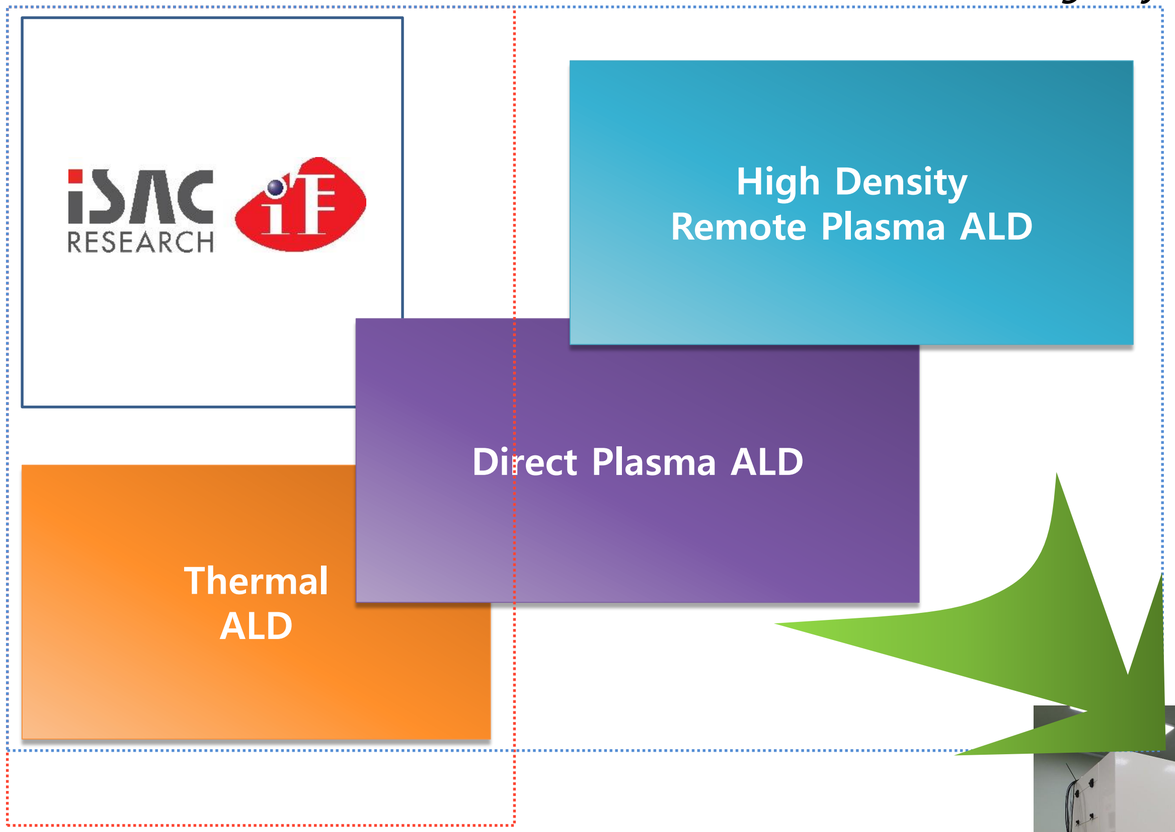
D. TVAROG[1,2], M. PULTAR[1], M. ČADA[1], Z. HUBIČKA[1], J. KIM[3], A. PORUBA[4] and V. BEREZENKO[4]

[1] Institute of Physics, Czech Academy of Science, Prague, Czech Republic
[2] Joint Laboratory of Optics, Faculty of Science, Palacký University Olomouc, Czech Republic
[3] Department of Research and Development, ISAC Research Inc., Daejeon, Republic of Korea
[4] SVCS Process Innovations, Brno, Czech Republic

tvarog@fzu.cz

Achievement through Project

At the End of 2019 Closing Project



At the beginning 2016

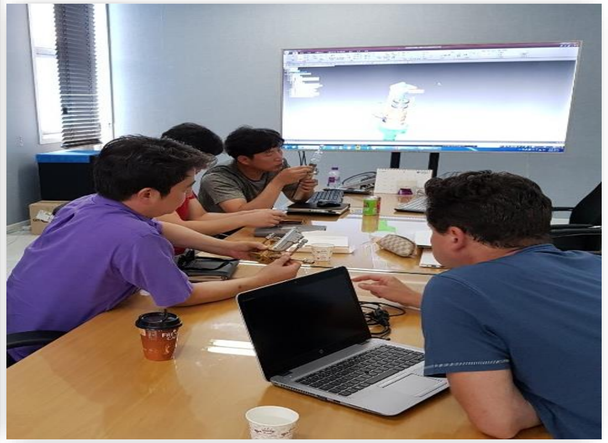
Our Continuing Efforts

- Penetration into the market of high density remote plasma ALD reactor for R&D
- Mass Production Equipment Market Penetration with Advanced Process Application

Launching of
Plasma ALD Equipment Platform
(2020 Jan)

Korea-Czech Cooperation

- Annual Joint Workshop
- Mutual Technical Consulting
- SEMICON & International Exhibition
- Co-organization for ALD Conference Exhibition



Thank you!

HOW TO FIND YOUR MATCH?

Search for partners

- **TACR Partnering Tool** - Assistance from TA CR in order to find a partner.
- **TA CR STARFOS** - Full-text search engine for projects and results in the areas of research, experimental development and innovation that were supported by state funds from the Czech Republic. You can search for a Czech partner in the project consortium.
- **Partner search tool** of **EEN** (Enterprise Europe Network)

Partnering Tool

If you are interested in finding a suitable foreign partner or you would like to offer your cooperation, use the buttons for registration.

Post a Partner Request | Post a Partner Offer

The Technology Agency of the Czech Republic helps Czech enterprises and research organizations to establish cooperation in the area of applied research and innovations.

TACR Partnering Tool

Database of partner offers/requests:

Offer | Request

Country + | Type of organisation + | Topic + | Keywords

1 - 6 / 6

Directory
CEITEC, Brno University of Technology
Biology Centre CAS, SOWA-RI
Taeseok P&I Co.,Ltd
Farmtec
IAM Co., Ltd.
Institute of Thermochanics, CAS

Name of Organisation/Institution/Company: CEITEC, Brno University of Technology
Type of Organisation : research organisation
Country: Czech Republic

Contact
Name:
Surname:
Email :
Phone Number :

Information
Keywords: Materials, Recycling, Materials in medicine, nanocomposites, modeling

PITCH SESSIONS

ROBOTSYSTEM

Description of our organisation

Small private research and development company in the field of robotics (30 employees)

Research areas

Service robotics in following sectors:

- Light and heavy industry (transport and manipulation systems, grippers)
- Nuclear energetics (transport, manipulation and storage of disposal casks with spent nuclear fuel in underground deep geological repositories)
- Healthcare (transport and rehabilitation of seniors / people with limited mobility – walkers, transformable robotic beds, stretchers)
- Rescue and emergency (hit gripping and fire-extinguishing robots, multipurpose robotic transporters)

Our cooperation interest

Preparation and realisation of common research project in one of fields mentioned above

Description of our partner of interest

Korean company, research institute or university engaged in the field of artificial inteligence, autonomous navigation and telemedicine monitoring

Keywords

Robotics, transport, manipulation, gripping, rescue, rehabilitation, artificial inteligence, autonomous navigation, telemedicine monitoring

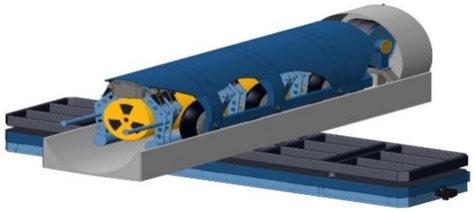
Contact info

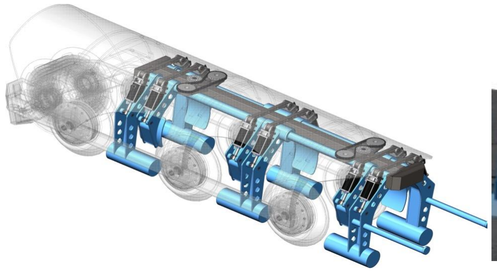
- David Pawera
- info@robotsystem.cz
- +420 774 031 339
- ROBOTSYSTEM, s.r.o.
- SME (small and medium sized company)
- www.robotsystem.cz
- Czech Republic

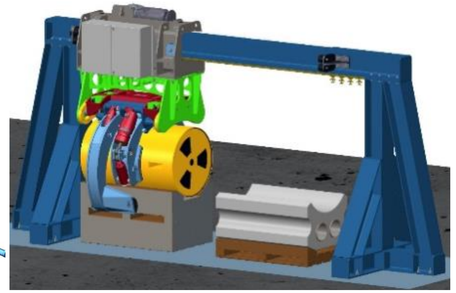
AREAS OF RESEARCH AND DEVELOPMENT

Medical transport and rehabilitation technologies

Robotics in nuclear energetics

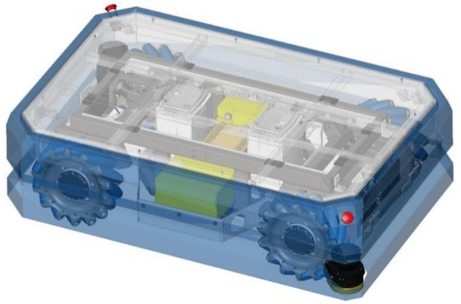






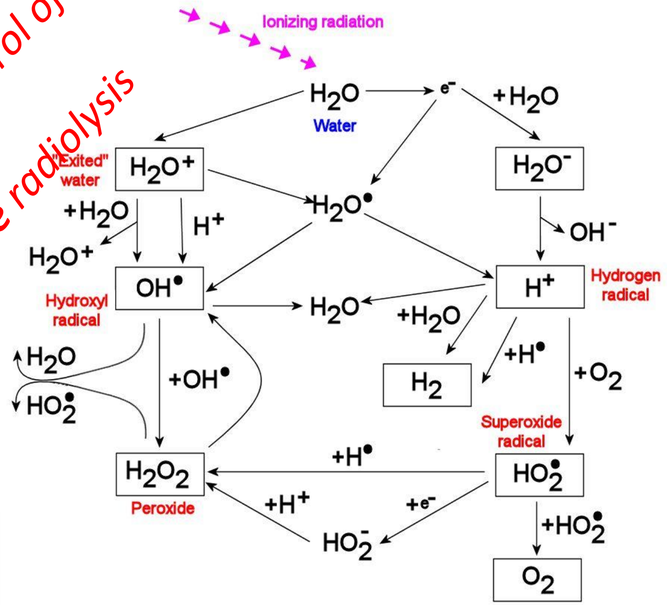
Rescue and emergency technologies

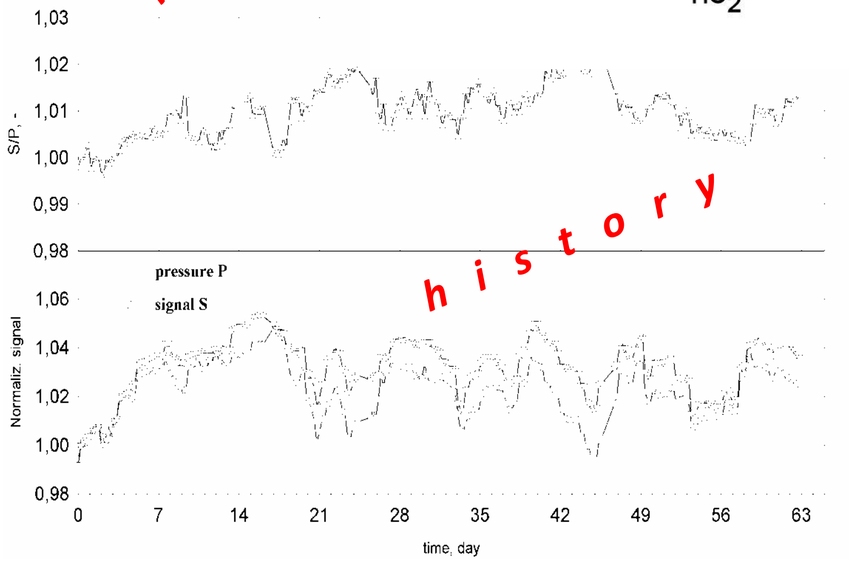
Transport and manipulation systems for light and heavy industry



Hydrogen sensor development

measure H_2 for better control of its dosage to **suppress corrosive** radiolysis **products**





history

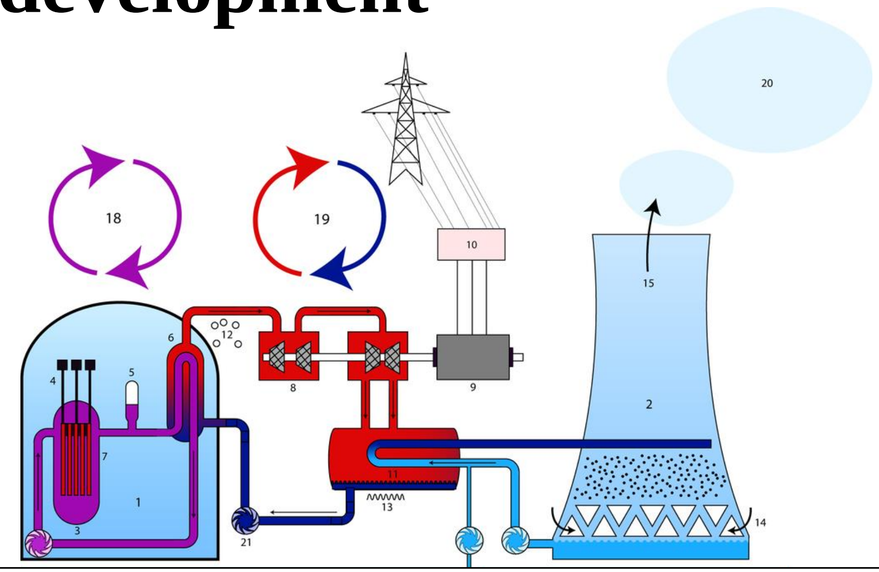
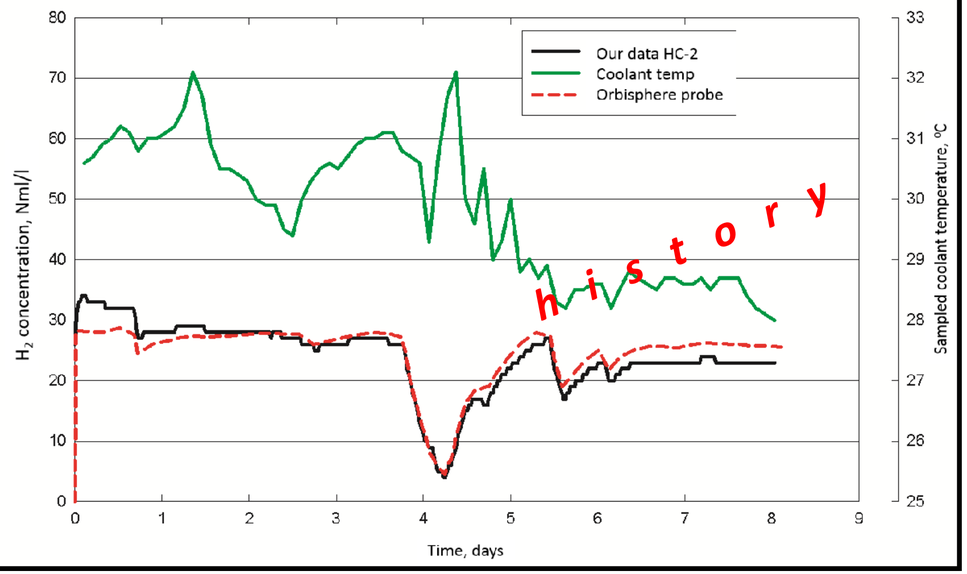


Fig.1: The comparison of dissolved hydrogen data measured in primary cirquit coolant in Dukovany NPP using two different devices, HC-2 and Orbisphere, in the period from 14th to 22nd September 1999



history

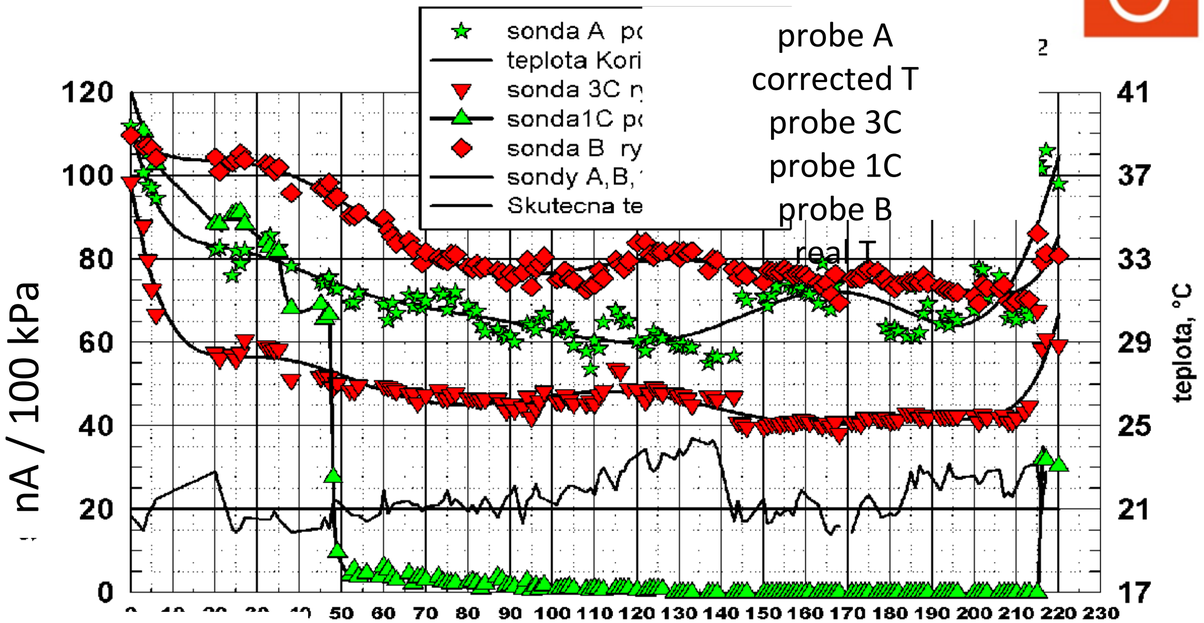
Tomáš Moucha, Technická 5, CZ-166 28 Praha 6; phone: +420220443297, email: mouchat@vscht.cz

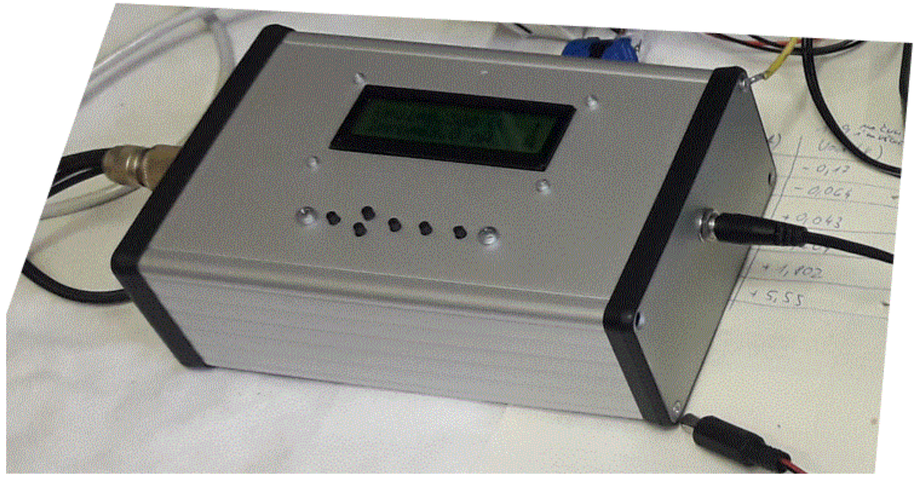
Mass Transfer Laboratory at Chemical Engineering Dept

UNIVERSITY OF CHEMISTRY AND TECHNOLOGY PRAGUE

- long-term stability improvement: 3 months (quarterly service)

p r e s e n t





? cooperation in>

-functional sample tests in NPP
-prototype development

Tomáš Moucha, Technická 5, CZ-166 28 Praha 6; phone: +420220443297, email: mouchat@vscht.cz

Pitch session

Description of your organisation

OTS is a company specialized in security products production and installation. Our major product is Auto lift, Roadkill, Illegal dumping trash surveillance system, CDMA communicator etc.

Specify your cooperation interest

We are going to level-up current product lines from just “security equipment” to the “Smart IT equipment”.

Description of your partner of interest

Company who is interested to sell our products in Czech Republic and nearby countries or who is specialized in developing AI Image recognition and analyzing technology

Research areas

AI

Keywords

AI , Sales Representative

Contact info

Please, write information you would like to share

- Name:H.J.Yoo
- e-mail address: ots1440@naver.com
- phone number: 82-10-2805-1657
- name of company: OTS
- type of organization: Corporate
- Website: www.ots.co.kr
- Country: Republic of Korea.

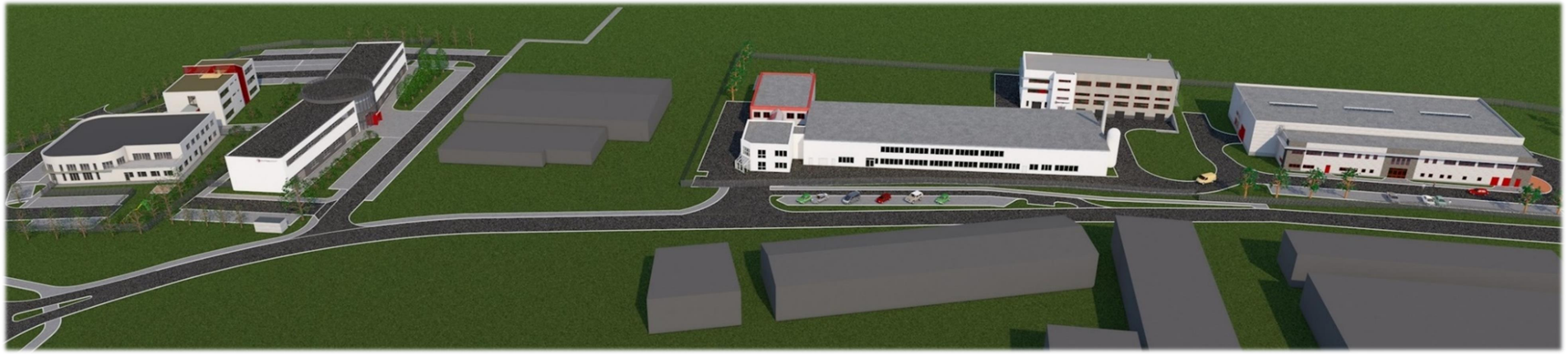

COMTES FHT®
Complete Technological Service - Forming, Heat Treatment

R&D in metals

COMTES FHT®
Complete Technological Service - Forming, Heat Treatment

www.comtesfht.cz

Laboratories over 10.000 m^2



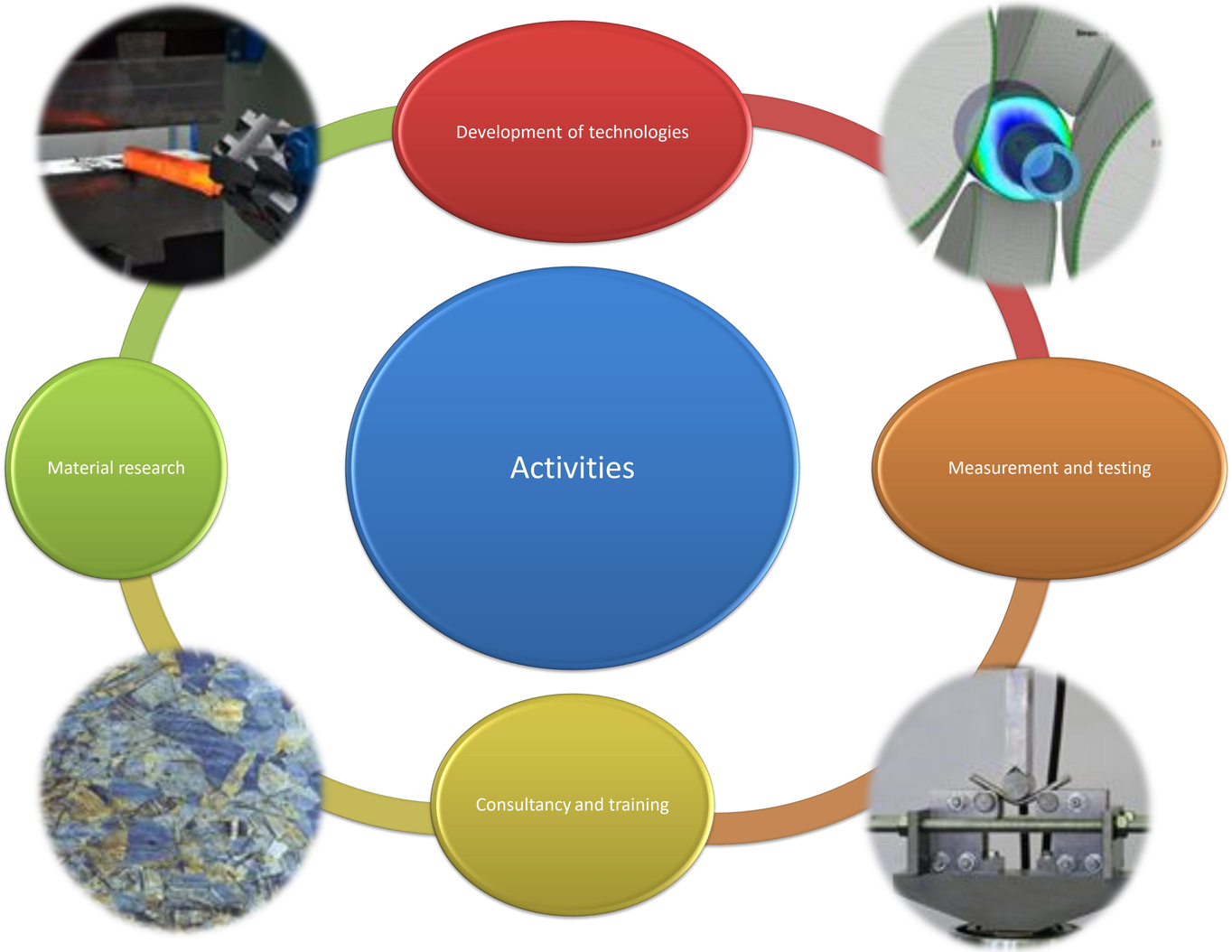
WHO WE ARE

- Private **R&D institute** established in 2000
- Shareholders: 4 Czech private persons with comprehensive experience in R&D and metallurgy
- **Service provider in the area of metallic materials development, materials testing and technology optimization**
- 95 employees (more than 70 researchers and technicians)
- Cooperation with many key market player such as Doosan, Daimler, Bilstein, Sulzer, Voestalpine etc.

MISSION

- Strengthening the competitiveness of European manufacturing companies by supporting them in the development, innovation and introduction of state-of-the-art processes and products.
- Creating a sustainable model of cooperation between manufacturing companies and research sector
- Underlying premise: sustainable business success depends on the ability to produce high-quality products and to exploit new technologies

WHAT ARE WE DOING



Power industry

ATABOR

ŠKODA JS a.s.

Development of and innovation in austenitic stainless steel sheet with specific properties for spent nuclear fuel storage

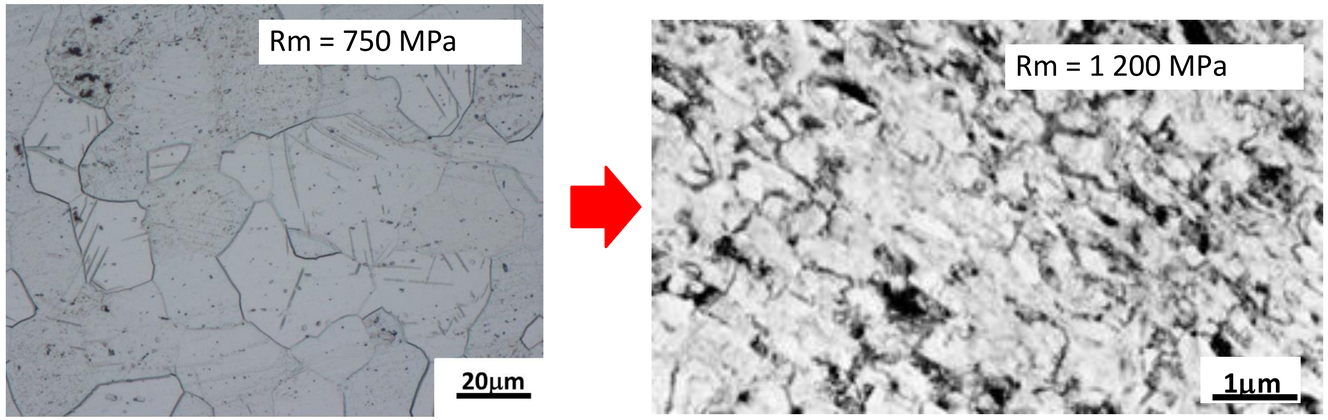
- Research, development and innovation of a complex technological process of sheet metal production of a special austenitic stainless steel alloyed with boron which is used for storage chambers of spent nuclear fuel in wet and dry conditions
- The goal is to create the necessary know-how for starting the production of such sheet metals in the Czech Republic

WIRETECH

Research and development of high-strength wires technology production for hi-tech industry

Biomedicine

- Research and development of high-strength wires for the most demanding industrial applications (watchmaking, implantology, aerospace, jewelry, etc.).
- Processing of metal products is performed using modified continuous extrusion (CONFORM SPD) and rotary swaging
- Production of ultra-fine-grained to nano-structural materials **->** higher strength characteristic
- Pure titanium



Research projects examples

EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání
MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY

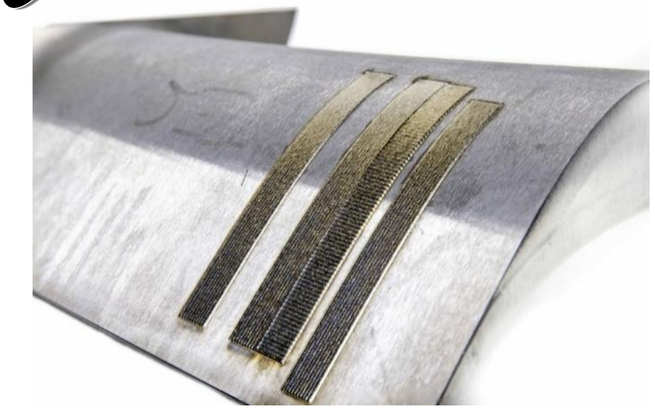
GRAMATECH

Pre-Application Research of Functionally Graduated Materials by Additive Technologies

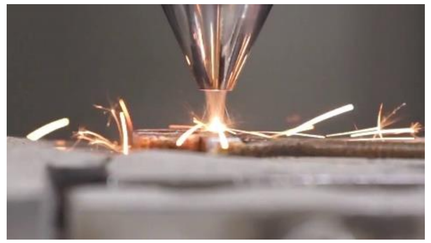
- Depositing and repairing
- Graduated materials (4 powder feeding system)

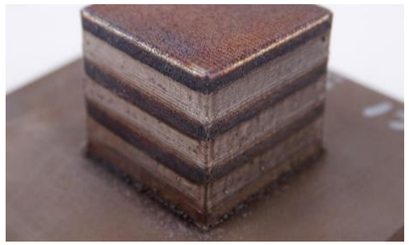
Additive manufacturing

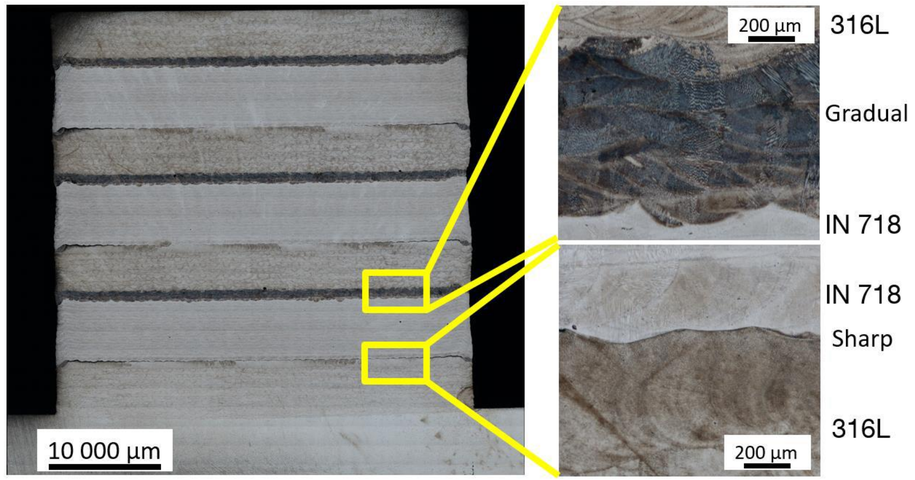
Graduated material: Ti + TiC



Repairing turbine blades







316L + IN718

WHAT ARE WE LOOKING FOR

Partners interested in:

- New materials and design
- Optimization and new technologies development
- Materials processing
- Mechanical and thermophysical characterization

Contact:

Prof. Ing. Jan Džugan, Ph.D.
jan.dzugan@comtesfht.cz
www.comtesfht.cz
Tel.: +420 775 201 421

Questions and answers

T A

C R

Technology
Agency of the
Czech Republic

www.tacr.cz/en

DELTA 2 PROGRAMME TEAM

Ms. Eva Pentel
International Cooperation Coordinator
E: eva.pentel@tacr.cz

Ms. Radana Díťová
International Cooperation Coordinator
E: radana.ditova@tacr.cz

Ms. Kateřina Feiglová
International Cooperation Coordinator
E: katerina.feiglova@tacr.cz

T A
Č R