CROSS-THEMATIC WORKGROUPS – TASKS, ACHIEVEMENTS AND GOALS

Workgroup Plasma & Education

Common international education
“Understanding plasma”

- Exchange of lecturers and students
- Organisation of placements
- Summer schools/training courses for company employees
- Common educational projects (e.g. Erasmus)

Planned:
- Double degree study programmes (increases the attractiveness of degree study programmes)
- Dual degree programmes (degree study programme and experience in industry)

Workgroup Plasma & Marketing

Technology/Scientific marketing
“Making plasma technology more visible”

- Organisation of presentations and events (e.g. trade fairs, workshops)
- Public relations work in connection with R&D results, services and products (e.g. delegation visits, informational workshops, trade fairs)
- Acquisition of new partners for the network (industry and research)
- Market analysis
- Initiation of technology transfer

Workgroup Plasma & Russia

- Assistance of partners in Russia in the areas of business, education, research and development
- Initiation of cooperation with Russia
- Joint development projects
- Support the market entry (in both directions)
- Getting in contact with potential partners

PulsPlasma® Nitriding for Wear and Corrosion Protection

- Cost and Resource-effective
- Flexible Plant Concepts
- Variable Nitriding Processes
- Low Temperature Treatments
- Process Combination

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TOPIC-SPECIFIC WORKGROUPS – CURRENT WORK AREAS

**Workgroup Plasma & Surfaces**

Modification of surfaces

*“Plasma technologies for functional surfaces“*

- Activation
- Cleaning
- Coatings
- Etching
- Ion implantation

**Workgroup Plasma & Bio**

Combination of plasma technology with life sciences

*“Plasma technologies for a healthier life“*

- Plasma medicine
- Non-abrasive microbial reduction
- Cleaning up to including sterilisation
- Absorbable layers
- Coatings of implants
- Decontamination of plastic surfaces (e.g. catheters, bottles)
- Research on the influence of plasma on cells and tissue
- Plasma in the field of food technology

**Workgroup Plasma & Environment**

Applications of plasma for environmental protection

*“Plasma technologies for a healthier environment“*

- Exhaust air and exhaust gas purification (e.g. plasma filter for VOC degradation, NOx/SOx reduction, odour removal)
- Plasma for water purification - Plasma based Advanced Oxidation Processes (PbAOP)
- Use of waste for energy generation/pyrolysis
- Substitution of environmentally polluting (wet-chemical) methods with plasma processes
PROJECT EXAMPLES OF THE WORKGROUP PLASMA & ENVIRONMENT

- “PlasTEP - Dissemination and fostering of plasma based technological innovation for environment protection in the Baltic Sea region” (Interreg IVB)
- Era-Net Martec “Plasma-based catalytic treatment of exhaust emissions of marine diesel engines – PBCT”
- International research proposals in the field of Plasma enhanced Advanced Oxidation Processes PbAOP
PLASMA TECHNOLOGY – SOLUTIONS FOR NEW CHALLENGES

Registered as a non-profit association, BalticNet-PlasmaTec (BNPT) is an international cluster – located in Greifswald, Germany – which stands for a technology and market-oriented cooperation of science, research and economics in the field of plasma technology. As one of the most important plasma clusters in Europe, BNPT’s aim is to raise the perception of the plasma technology in society. BNPT is a contact partner for interested parties in the Baltic Sea region who intend to expand their own technical and economic potential in using the plasma technology. BalticNet-PlasmaTec has currently 70 members in 14 different countries (Baltic region states, Italy, the Netherlands, India and Brazil). More than 60% of them are from the industry.

Key technologies/plasma-based methods used in industry:

- Atmospheric pressure and vacuum coating at low and high temperatures
- Activation and modification of surfaces
- Etching
- Cleaning up to including sterilisation
- Plasma cutting and welding
- Pollutant degradation in gases and liquids
- Production of light and radiation
- Plasma-chemical processes e.g. for synthesising new materials
- Optimisation of high-voltage switches

Strategic goals of BNPT:

- Members’ support with the international research from the basics to the application
- Support for international partnerships between companies, particularly small and medium-sized enterprises and research facilities
- Creation of a visible international cluster in Europe and networking with dynamic regions around the world
- Support for basic and further training in order to guarantee the availability of qualified young employees
- Increase the visibility of plasma technologies in society
- Assistance of partners to open up new business segments and markets
70 MEMBERS FROM 14 COUNTRIES

June 2014

Brazil 5
Germany 33
Denmark 2
Estonia 1

Finland 2
India 1
Italy 1
Lithuania 2

Latvia 4
Netherlands 1
Norway 1
Poland 10

Russia 4
Sweden 3