



HSM TechConsult GmbH

Innovation in Surface Technologies
Saarbrücken, Germany

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HSM TechConsult GmbH

Saarbrücken, Germany

Management

Director/Executive Partner:

Prof. Dr. H. Schmidt

New Business Development:

Dr. Ch. Schmidt

Contracts, IP:

H. Schmidt

HSM stands for

- Consulting companies in the area of new surface technologies
- Setting up interdisciplinary projects from the idea to production
- Controlling projects and IP issues
- Coaching/Training

Background

Fraunhofer Organization: ISC

Würzburg, Director

Leibniz Institute for New Materials

Managing Director and Scientific Head)

EPG: CEO

HSM: Managing Director

Partners: SurFtech, Universities

- Pioneering chemical nano materials and applications since 1975
- Long term experiences in science, technology and production
- Many successful products on the market



- **Generation of individual high USP**
- **Adapting of existing basic technology platforms to customer's requests**
- **Setting up the route to reaching the goal**

Different approaches according to the customers needs

First step

Evaluation of the effort needed to reach the target starting from technology platforms

Consulting

Technology adaptation

Development

Implementation

IP assistance

E.g. sampling, feasibility study, R&D project

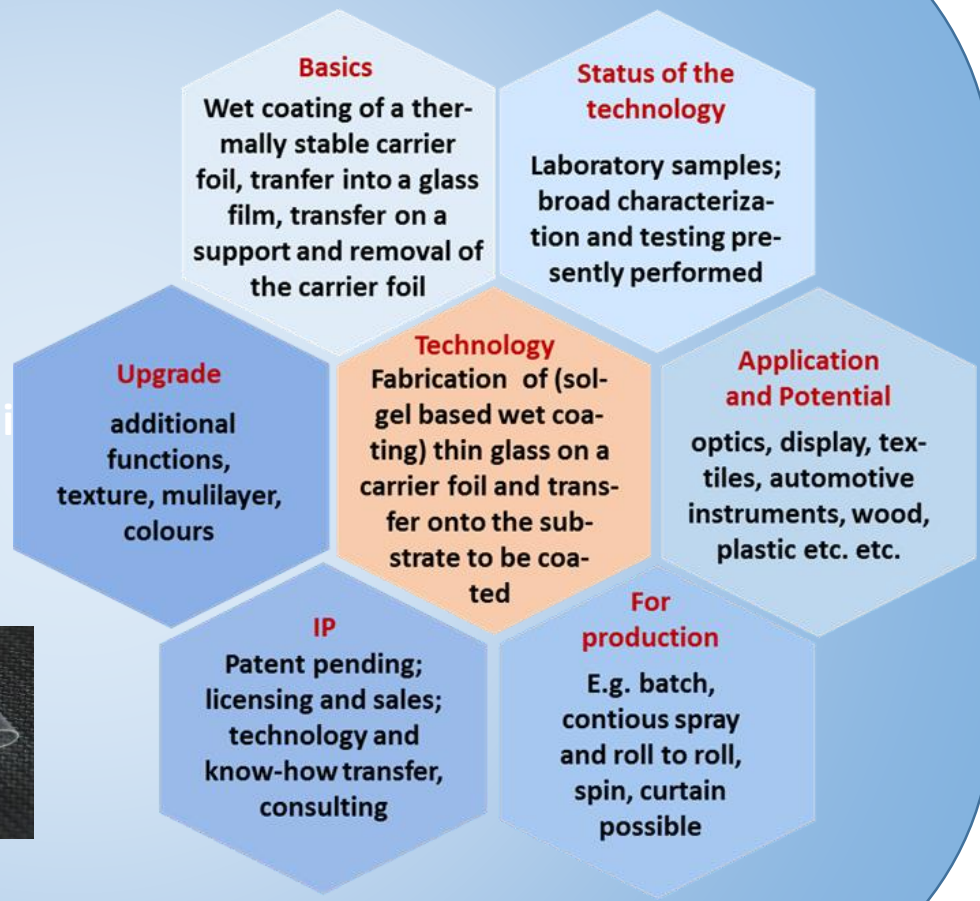
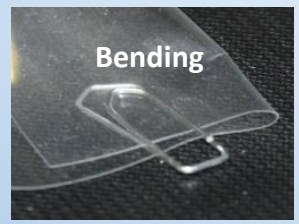
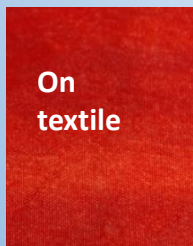
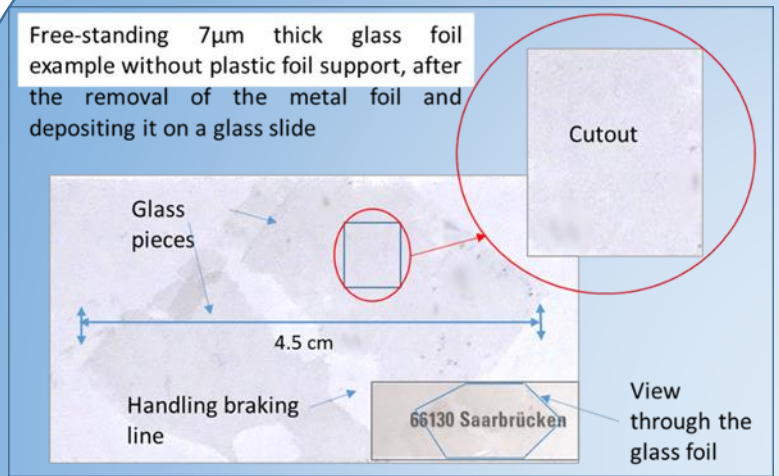
E.g. also contracting HSM partners involved

Also training and coaching if necessary

One stop shop as far as requested



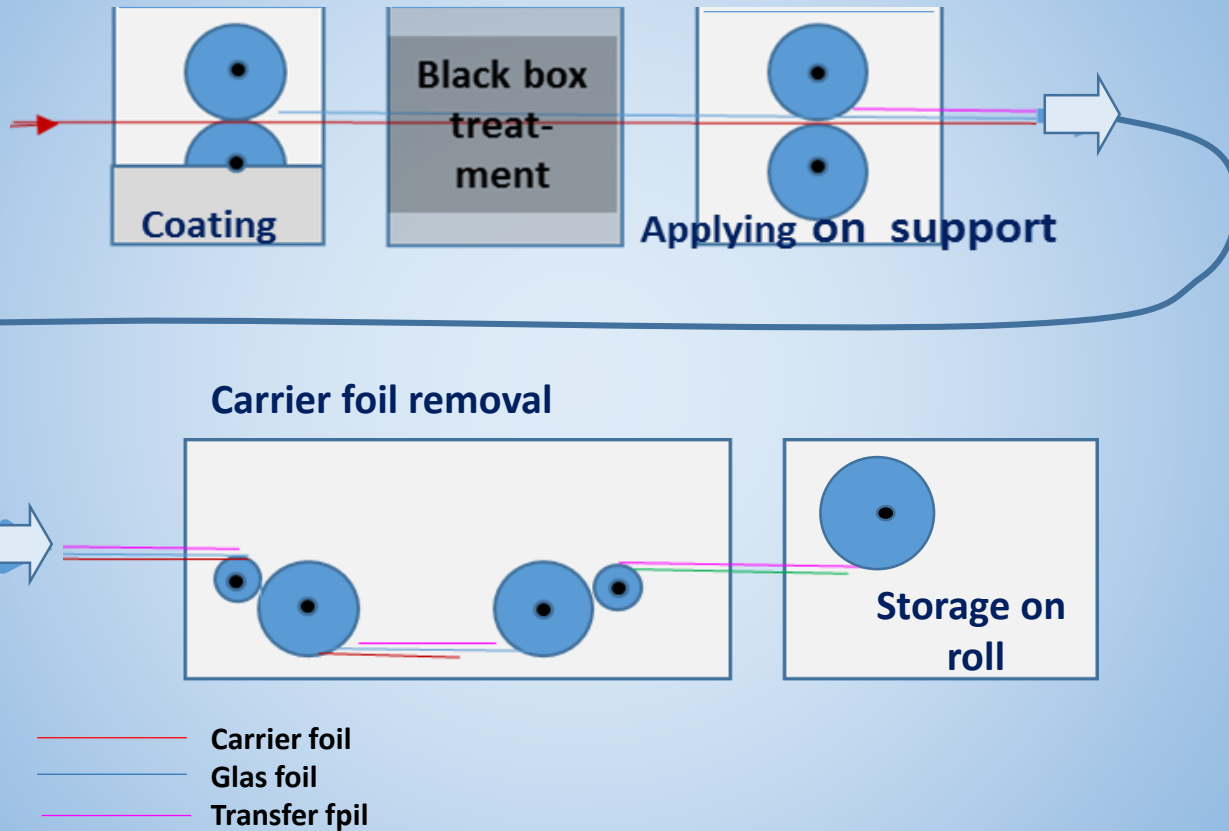
Technology Platform

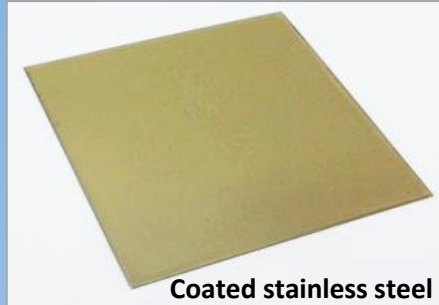


Continuous Production Conception

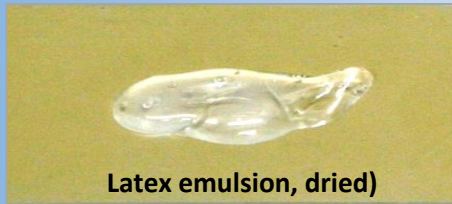


Technology
Platform

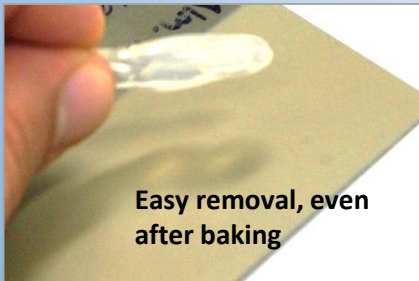




Coated stainless steel



Latex emulsion, dried)



Easy removal, even after baking

Basics

Thermally curable oligomers and specially processed ceramic additives; durable anti-stick effect, e.g.: Latex emulsions

Status of technology

Lab finished, anti stick on Latex customer approved; process; scalable; low to medium level temperature curing

Upgrade

Flexible multicomponent system, adaptable to many applications through property tuning to many customer requests

Technology

Multicomponent thick film (up to 70 μm in one step) coating abrasion resistant, corrosion protection

Application potential

Transport of sticky goods; chemically reactors, valves, tubing and piping, pressing tools

IP

Know-how based; patenting possible

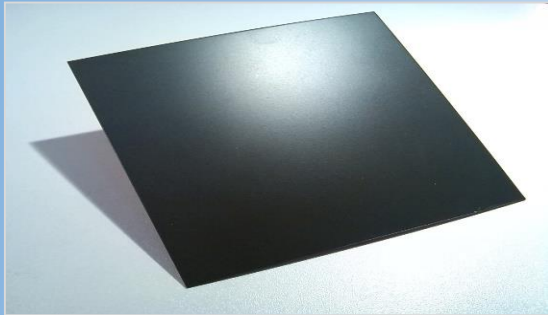
For production

Synthesis route for small scale dimension; any type of wet coating technology applicable

❖ Easy to Clean And Sterilizable Anti-Static Coatings



Technology
Platform



Basics

Sol-gel hybrid matrix with special conductive μm and sub μm size particles with controllable conductivity

Status

Lab material finished; customer tested; sterilizable; 120 alkaline cleaning/sterilization cycles: no change in hydrophobicity; cigarette ash test o.k.

Upgrade

additional functions, colourless/translucent possible

Technology

Combination of different properties and one and the same coating material: corrosion protection, antistatic and easy to clean properties

Application and potential

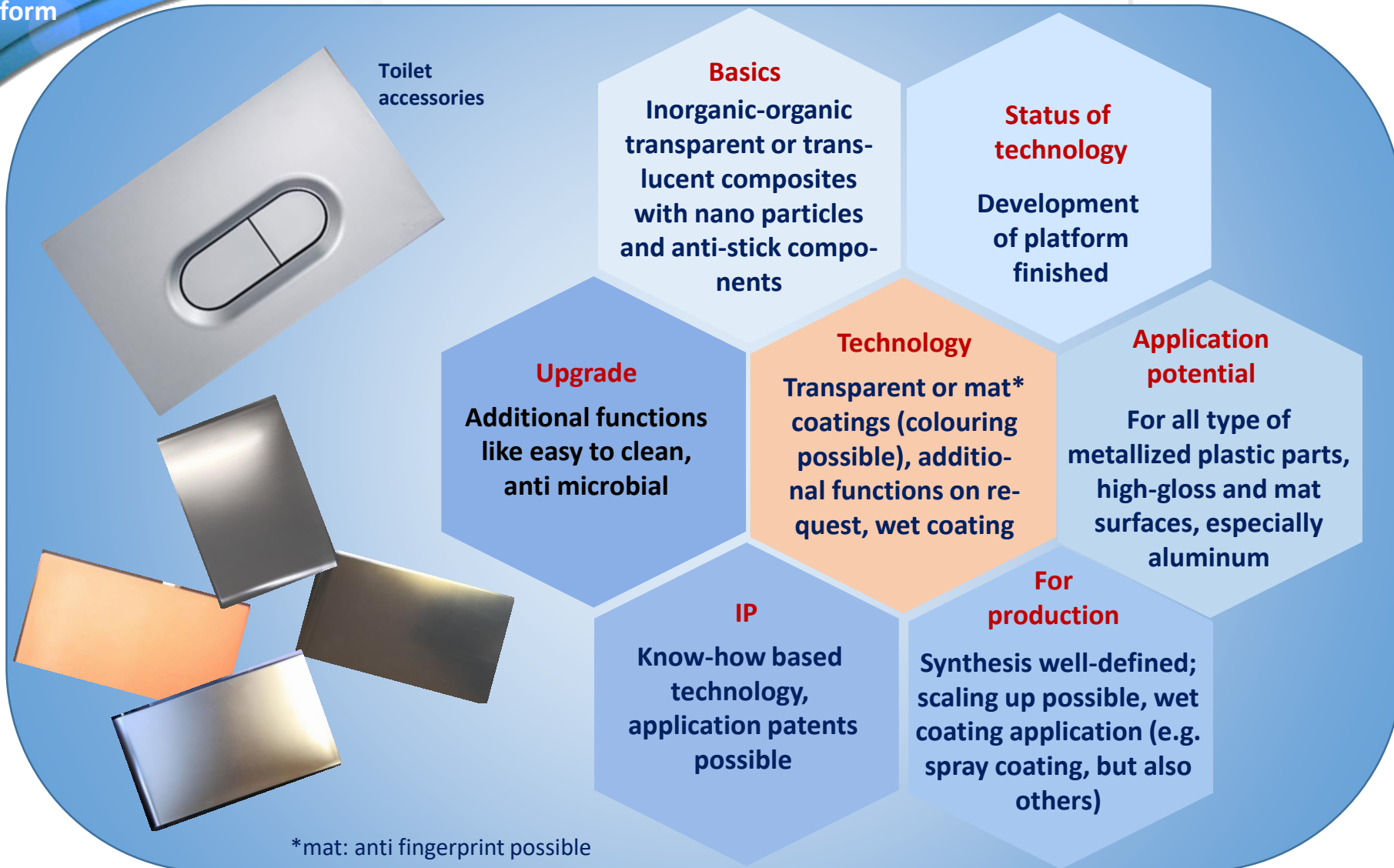
surgical instruments ; clean room technologies and equipment; electro-magnetic compatibility

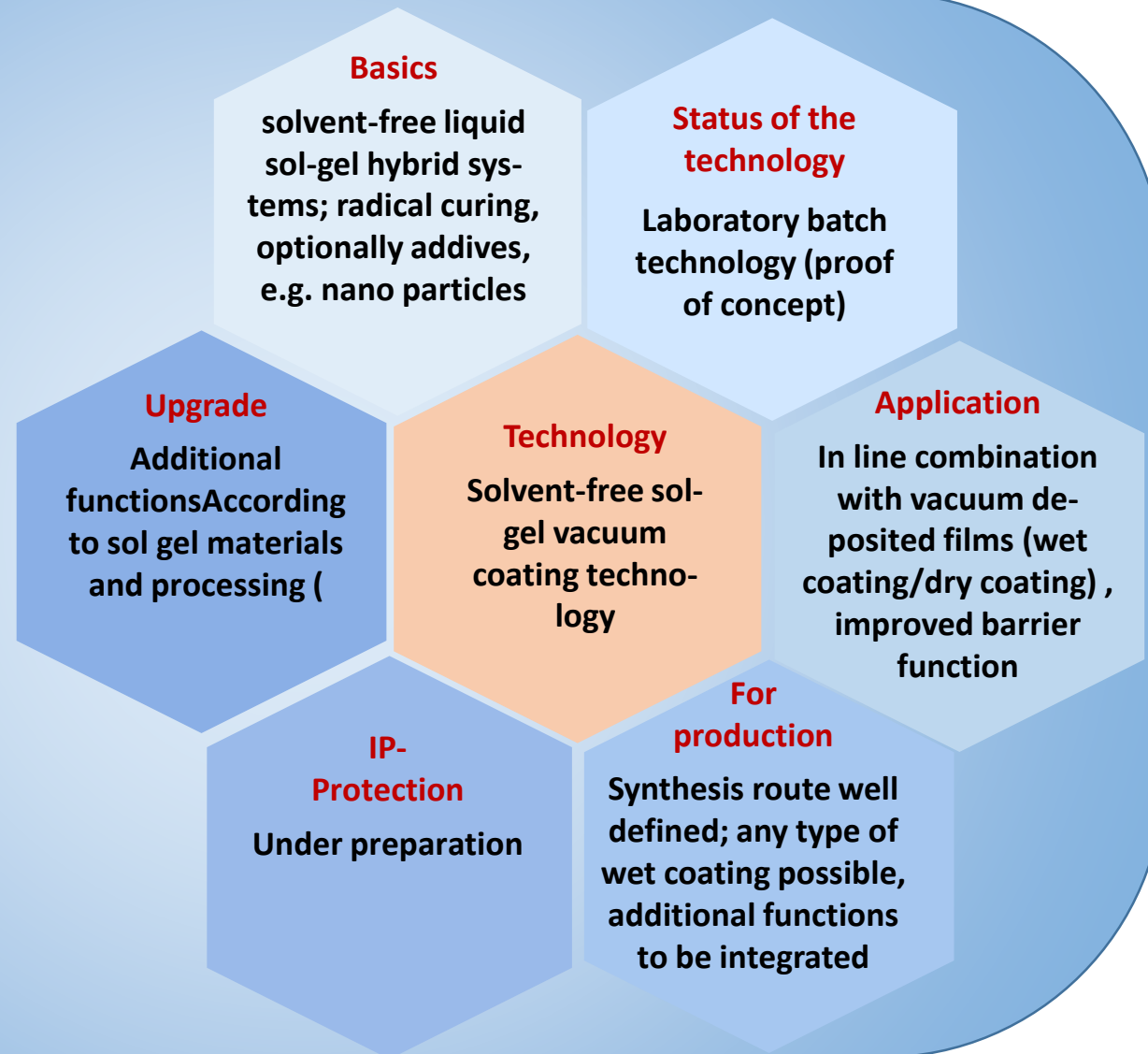
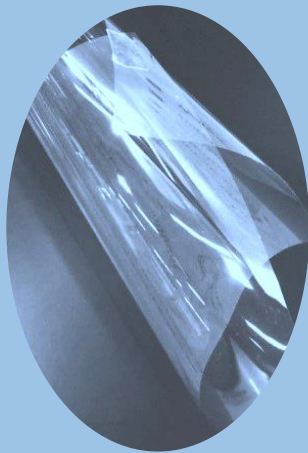
IP

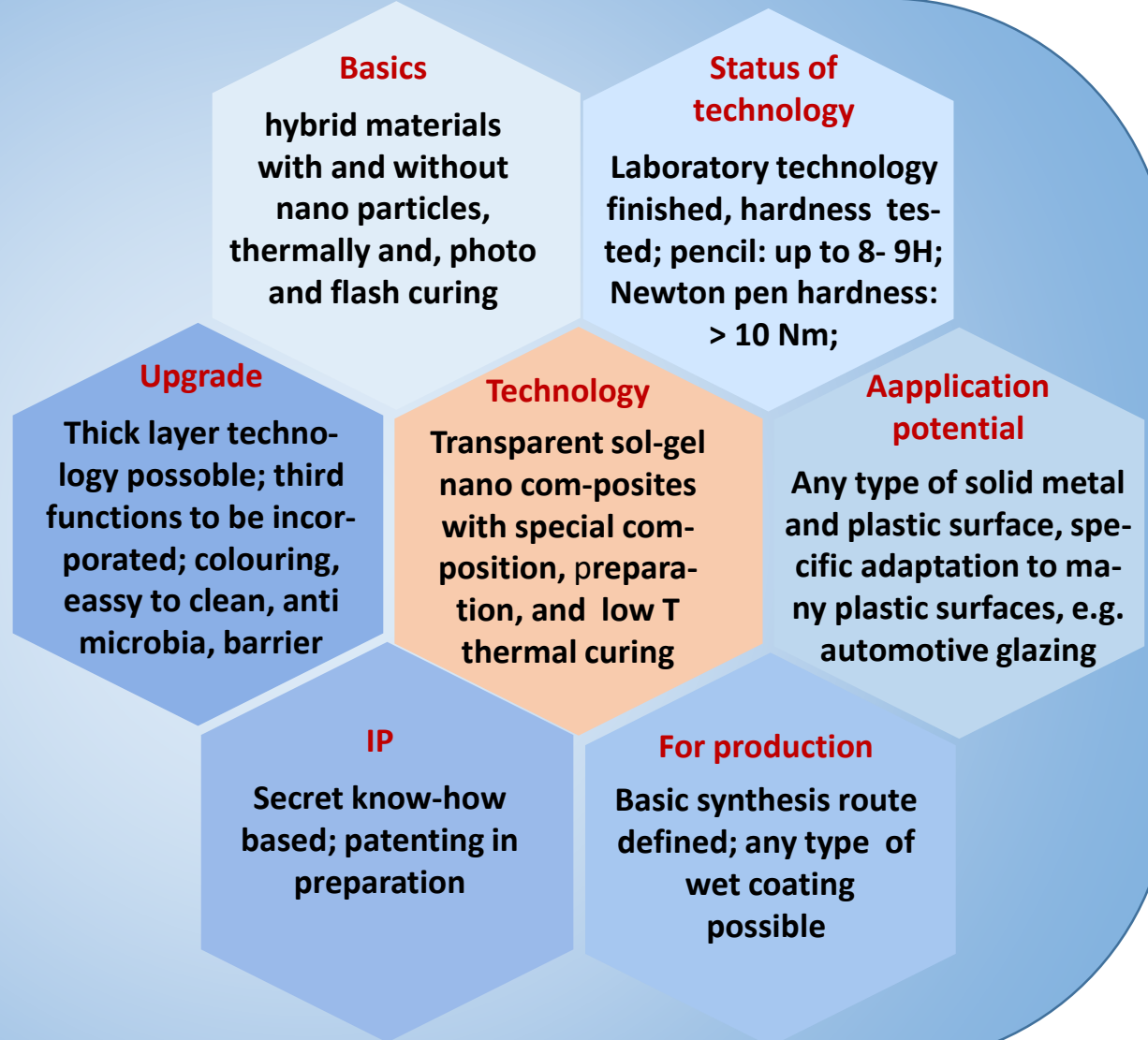
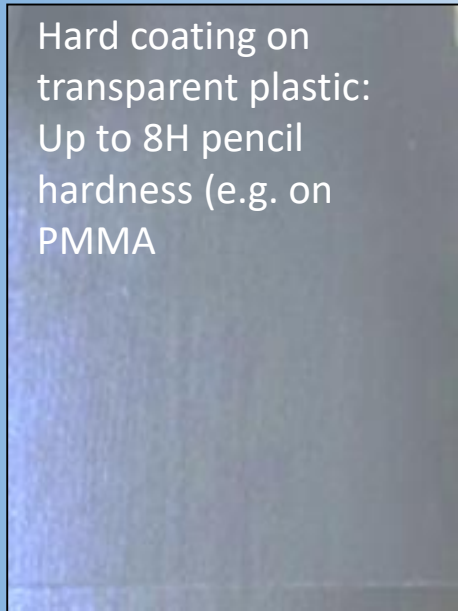
highly secret know-how: patenting possible

For production

Synthesis route well defined; applicable by any type of wet coating technology; low-temperature curing









Thank you very much for your attention