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Innovative Development of Alternative Composites to Carbon-Based Materials

Reference Number: RDRTR20241022012


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OBA PERDESAN TECHNICAL TEXTILE INC.

Oba Perdesan has been active in the production, sales, and after-sales support of various mechanized blind systems for interior spaces since 1972.

212 employee	annual production capacity of 1.5 million finished blinds	3 million meters of roller blind fabric
around 6 million meters of plastic raw materials	3000 tons of aluminum profiles	More than 1200 dealers in Turkey and exports to more than 75 countries abroad

The company has made significant investments in technical textile technologies and extrusion machinery, allowing for the creation of innovative products like Truwood and antiviral fabrics. Furthermore, they actively collaborate with universities and industry partners to develop high-value-added products. Alongside their work in technical textiles and extrusion of polymers and aluminum, Oba Perdesan is also engaged in R&D initiatives focused on fuel cell components.

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VISION

Project Goal: Development of new-generation polymer nanocomposites.

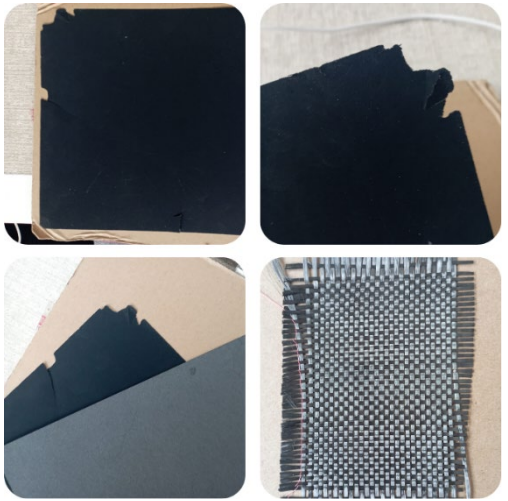
Objective: To provide alternatives to carbon-based materials.

Technology: Integration of nanoparticle-sized fillers into the polymer matrix.

Application Areas: Providing alternative solutions in various sectors, automotive, construction, energy, packaging and aviation sectors.

ADVANTAGES

- Enhanced mechanical properties
- Reduced energy consumption
- Improved thermal stability
- Increased electrical conductivity
- Enhanced chemical resistance



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MOTIVATION

Issues with Carbon-Based Materials:

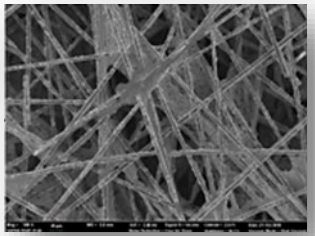
- Toxic gas emissions from high thermal processes
- Fluctuations in mechanical properties
- Excessive energy consumption

Objective:

- Reduce environmental impact
- Enhance performance in industrial applications

Solution:

- Potential to provide more efficient and eco-friendly materials through new-generation polymer nanocomposites.



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CONTENT

Focus of the Project:

Development of polymer nanocomposites by integrating nanoparticle-sized fillers.

Key Developments:

Enhance mechanical properties of the composites.

Reduce energy consumption during production.

Improve thermal stability, electrical conductivity, and chemical resistance.

Objective:

Provide innovative solutions applicable across various sectors, particularly benefiting the energy industry.

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EXPECTED OUTCOME

- The project is expected to yield innovative polymer nanocomposites with enhanced mechanical properties, improved thermal stability, electrical conductivity, and chemical resistance.
- These new materials will be characterized through rigorous testing, showcasing their potential as viable alternatives to traditional carbon-based materials.
- Additionally, the project aims to establish a comprehensive understanding of the processing techniques for these nanocomposites, facilitating their future commercialization and application across various industries.

IMPACTS

- The anticipated market impact of the project includes a shift towards more sustainable and energy-efficient materials in sectors such as automotive, construction, energy, packaging, and aerospace.
- By providing high-performance alternatives to carbon-based materials, the project will contribute to reducing environmental impact and production costs.
- The development of these advanced polymer nanocomposites is expected to meet increasing industry demands for lightweight, durable materials while also addressing safety concerns associated with toxic gas emissions during production processes.

PARTNERS SEACH

Reference No: RDRTR20241022012

SCHEDULE:

- ***Start Date:*** January 2026
- ***End Date:*** December 2028
- ***Duration:*** 36 months

1. Type of partnership

Research and development cooperation agreement

2. Type and size of the partner

- Big company
- SME 11-49
- SME 50 - 249
- SME <=10

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Summary

Profile type	Company's country	POD reference
Research & Development Request	**Türkiye**	**RDRTR20241022012**
Profile status	**Type of partnership**	**Targeted countries**
PUBLISHED	**Research and development cooperation agreement**	**• World**
Contact Person	**Term of validity**	**Last update**
Berkcan TERZIOGLU	**22 Oct 2024** **22 Oct 2025**	**22 Oct 2024**

OBA PERDESAN TECHNICAL TEXTILE

CONTACT INFO

Nurgül ALP

R&D Engineer

E-mail

nurgul.alp@obaperdesan.com.tr

Phone

+90 531 665 12 09

+90 850 622 68 80

Address

34782 Cekmekoy/Istanbul

Headquarter Coordinates: 41.047300 29.176573

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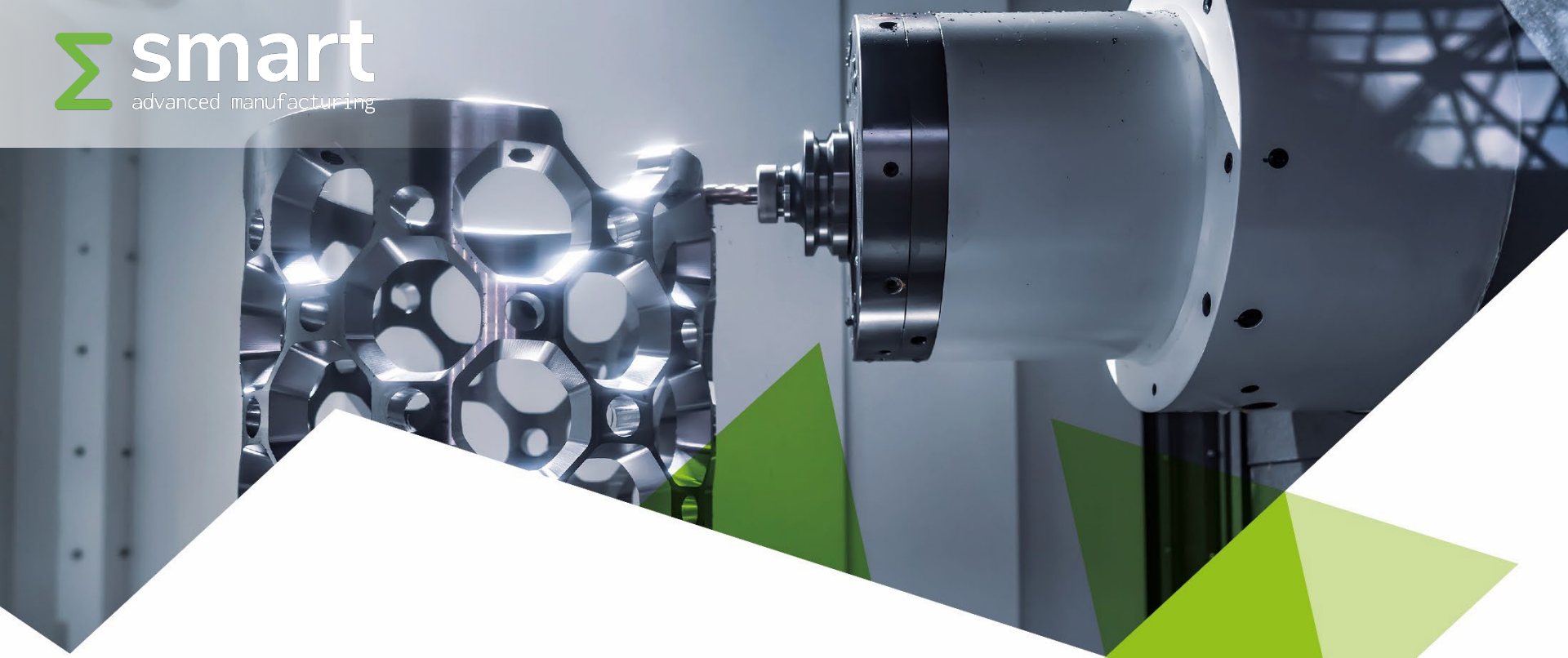

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