

## Technology Offer

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# Technology for bioethanol production from wood waste by enzymatic hydrolysis

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## Summary

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*A Romanian research team has developed and patented a technology for obtaining bioethanol from wood. Industrial partners active in biomass and biofuel production are sought for, in order to develop, validate and introduce the new technology into production, under license agreement and commercial agreement with technical assistance (engineering and technical assistance).*

<b>Creation Date</b>	13 January 2016
<b>Last Update</b>	29 January 2016
<b>Expiration Date</b>	29 January 2017
<b>Reference</b>	TORO20160113002

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## Details

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### Description

The Romanian research team has developed a technology for obtaining bioethanol by separate enzymatic hydrolysis and fermentation of wood. The technology for converting wood into ethanol by enzymatic hydrolysis consists in:

- pre-treatment of cellulosic waste for separation of cellulosic fractions from wood material using autohydrolysis method;
- enzymatic hydrolysis of cellulose;
- fermentation of sugar solution with yeast;
- distillation of ethanol obtained.

The Romanian research team is looking for license agreement and commercial agreement with technical assistance (engineering and technical assistance) with an industrial partner active in biomass and biofuel production, in order to develop, validate and introduce the new technology into production.

### Advantages and Innovations

- The raw material is renewable resource;
- Autohydrolysis pre-treatment is an environmentally friendly pre-treatment for separation of hemicellulose-derived sugars;
- The technology converting both cellulose and hemicellulose to bioethanol;
- The final product is a biofuel with low pollution and no greenhouse effect.

### Stage of Development

Under development/lab tested

### IPR Status

Patents granted

## Comment Regarding IPR status

Patent granted for Romania by the State Office for Inventions and Trademarks (Romania).

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## Keywords

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### Technology

04005003	Liquid biofuels
04005006	Solid biomass

### Market

06003009	Biomass and Biofuels
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### NACE

M.72.1.9	Other research and experimental development on natural sciences and engineering
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## Network Contact

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### Issuing Partner

NATIONAL INSTITUTE OF RESEARCH AND DEVELOPMENT FOR OPTOELECTRONICS

### Contact Person

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**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Intelligent Energy

## Client

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### Type and Size of Organisation Behind the Profile

Industry SME 50-249

### Year Established

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### Already Engaged in Trans-National Cooperation

No.

### Languages Spoken

English

### Client Country

Romania

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## Partner Sought

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### Type and Role of Partner Sought

Type of partner sought: industrial partner with activity field in biomass and biofuel production  
Specific area of activity of the partner: biofuel production.

Task to be performed by the partner sought: development, validation of technology and industrial production of bioethanol. The Romanian research institute offers technical assistance for technology adaptation and bioethanol production.

### Type and Size of Partner Sought

SME 51-250

### Type of Partnership Considered

License agreement

Commercial agreement with technical assistance