

*Registration Form*

***The 28<sup>th</sup> International Exhibition of Inventions***

**“INVENTICA 2024” Iasi, Romania**

**Patent / patent application/ research project registration deadline: 09.06.2024.**

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Participant name (University, Research Institute, Company)	Technical University of Moldova, Institute of Microbiology and Biotechnology, „D. GHIȚU” Institute of Electronic Engineering and Nanotechnologies
Patent / patent application/ research project title	<b>A low-density polyethylene destruction procedure</b>
Authors	CORCIMARU SERGHEI, GUȚUL TATIANA, MERENIUC LILIA, SÎTNIC FEODORA, LUPU MARIA
Patent/ patent application/research project number	<b>s 2023 0105/2023.12.29.</b>
Patent/ patent application/ research project description (Romanian), max. 100 words	Invenția se referă la reciclarea polietilenei de densitate joasă (LDPE), în particular la un procedeu de distrugere a peliculelor de LDPE în 3 etape: (a) fotooxidarea LDPE prin iradierea cu UV, (b) tratarea LDPE cu nanocompozitul de ferită de magneziu stabilizată cu polivinilpirolidonă și (c) incubarea peliculei în mediul mineral cu adaos de lignină hidrolizată. Rezultatul invenției constă în accelerarea biodegradării deșeurilor de polietilenă – până la gradul de distrugere de 18% după 100 zile incubaționale.
Patent/ patent application/ research project description (English), max. 100 words	The invention aims at recycling low-density polyethylene (LDPE). It refers to a LDPE film destruction procedure consisting of 3 consecutive stages: (a) LDPE photooxidation by UV radiation, (b) LDPE treatment by a nanocomposite containing magnesium ferrite stabilized by polyvinylpyrrolidone, and (c) LDPE incubation in a mineral medium amended with hydrolyzed lignin waste. The procedure permits acceleration of the processes of LDPE biodegradation up to the level of 18% of weight loss in at most 100 incubation days.
Patent / patent application/ research project domain	Environment protection.
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