



**TEMATICĂ PENTRU ADMITEREA LA STUDII
UNIVERSITARE DE DOCTORAT
SDSI – Domeniul : *INGINERIA MATERIALELOR*
Prof. univ. dr. ing. ANGELESCU Nicolae**

A. PROPUNERI:

1. Sinteza compusilor de tip metal-metaloid

2. Materiale compozite metal-ceram

B. BIBLIOGRAFIE:

1.

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**TEMATICĂ PENTRU ADMITEREA LA STUDII
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SDSI – Domeniul *INGINERIA MATERIALELOR***

Prof. univ. dr. habil. ing. BRATU Vasile

A. PROPUNERI:

1. Cercetări privind îmbunătățirea calității oțelurilor inoxidabile utilizate la fabricarea aparatelor de uz casnic;
2. Cercetări privind modelarea matematică în domeniul proceselor obținerii și caracterizării materialelor;
3. Contribuții la îmbunătățirea structurii și proprietăților topiturilor metalice, fenomene interfazice la elaborarea aliajelor;
4. Contribuții la sudarea cu curenți de înaltă frecvență.

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**TEMATICA PENTRU ADMITERE LA STUDII
UNIVERSITARE DE DOCTORAT 2024-2025
SDSI - Domeniul *INGINERIA MATERIALELOR***

Prof. univ. dr. ing. ION Rodica - Mariana

PROPUNERI

1. Micro si nanomateriale pentru aplicatii medicale

Obiective

1. Micro si nanomateriale: sinteza si caracterizare
2. Testarea proprietatilor fotofizice si fotochimice a acestora
3. Testarea materialelor obtinute pe sisteme in vitro



4. Sisteme de incapsulare si formulari specifice

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2. Materiale si metode de investigare pentru diagnoza si tratamentele de consolidare/restaurare in patrimonial cultural din Romania.

Obiective:

1. Evaluarea materialelor prelevate din monumente istorice
2. Caracterizarea microstructurală, structurala si compozitionala a materialelor prelevate
3. Influenta factorilor de mediu asupra materialelor suport
4. Elaborarea de materiale in vederea restaurării si caracterizarea si testarea acestora

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3. Materiale membranare cu extracte de plante pentru aplicatii biomedicale si de protectia mediului.

Obiective

1. Preparare si caracterizarea unor membrane artificiale
2. Aspecte cinetice si mecanistice de retentie a diversilor poluanti din apele reziduale
3. Tehnici de caracterizarea structurală si compozițională a membranelor si extractelor de plante



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4. Tehnologii neconventionale (fotocatalitice) de degradare a poluantilor organici din apele reziduale.

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