1st International Conference
Nanomaterials: Applications & Properties

NAP-2011

PROGRAM

Alushta, Crimea, Ukraine
Sept. 27-30, 2011
MINISTRY OF EDUCATION, SCIENCE, YOUTH AND SPORTS OF UKRAINE
Sumy State University
V.N. Karazin Kharkiv National University
NATIONAL ACADEMY OF SCIENCE OF UKRAINE
Lublin University of Technology
Kaunas University of Technology

1-st INTERNATIONAL CONFERENCE

NANOMATERIALS: APPLICATIONS & PROPERTIES

NAP-2011

PROGRAM

Alushta, Crimea, Ukraine
Sept. 27-30, 2011

Sumy, Sumy State University
2011
Dear Colleagues!

The NAP-2011 Organizing Committee is very glad to Welcome You to our conference!

The conference is devoted to new actual problems of modern Material Science. Among them: technology of nanomaterial production, properties of bulk and thin film nanomaterials, nanomaterial-based coating, nanosystems and nanoparticles. The conference is focused on applications of nanomaterials in Industry, Biology, Medicine, Chemistry and methods of the nanomaterials research.

The Conference will be held in Alushta, on the Crimean-Southern shore, that is one of the most beautiful places in Earth. Alushta city (Aluston fortress) was founded in the 6th century by the order of Emperor Justinian. So, Alushta is a very ancient town with a rich history. The Mediterranean climate makes it the main resort and tourist area in Ukraine.

We wish You fruitful discussions and excellent rest among the wonderful nature of the Black-Sea cost. Hope, You will meet old friends and make new friends among the participants.

You can easily become acquainted with the Conference content and find many other helpful information any time using our smart website http://nap.sumdu.edu.ua/.
## Organizing Committee

### Chair

<table>
<thead>
<tr>
<th>A. Shpak (Ukraine)</th>
<th>A. Vasylyev (Ukraine)</th>
<th>A. Pogrebnjak (Ukraine)</th>
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<tbody>
<tr>
<td>chair</td>
<td>co-chair</td>
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### International Scientific Committee

<table>
<thead>
<tr>
<th>A. Grigonis (Lithuania)</th>
<th>G. Abrasonis, (Germany)</th>
<th>P. Zukowski (Poland)</th>
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<tbody>
<tr>
<td>A. Cavaleiro (Portugal)</td>
<td>R. Andrievskii (Russia)</td>
<td>E. Levashov (Russia)</td>
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<td>A. Korotaev (Russia)</td>
<td>P. Panjan (Slovenia)</td>
<td>E. Majkova (Slovakia)</td>
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<td>N. Azarenkov (Ukraine)</td>
<td>V. Uglov (Belarus)</td>
<td>F. Komarov (Belarus)</td>
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<tr>
<td>N. Ali (UK)</td>
<td>V. Anishchik (Belarus)</td>
<td>J. Musil (Czech Republic)</td>
</tr>
<tr>
<td>F. Cui (China)</td>
<td>V. Beresnev (Ukraine)</td>
<td>I. Protsenko (Ukraine)</td>
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<tr>
<td>G. Abadias (France)</td>
<td>J.P. Riviere (France)</td>
<td>J. Han (Korea)</td>
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<td>G. Bräuer (Germany)</td>
<td>D. Cameron (Finland)</td>
<td>A. Leson (Germany)</td>
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<td>R. Boxman (Israel)</td>
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## Organizing Committee

<table>
<thead>
<tr>
<th>V. Uvarov (Ukraine), chair of Organazing Committee</th>
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<tbody>
<tr>
<td>T. Lyutyy (Ukraine)</td>
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<tr>
<td>O. Ivanov (Russia)</td>
</tr>
</tbody>
</table>

## Local Organizing Committee

**Address:** NAP-2011 Conference, Sumy State University  
2, Rimsky-Korsakov Street, Sumy, 40007, Ukraine  
**Web:** [www.nap.sumdu.edu.ua](http://www.nap.sumdu.edu.ua)  
**E-mail:** nap@sumdu.edu.ua  
**Fax:** +380 542 33 40 58  
**Contact persons:**

<table>
<thead>
<tr>
<th>Salutation</th>
<th>Name</th>
<th>Family Name</th>
<th>Tel:</th>
<th>E-mail:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof.</td>
<td>Alexander</td>
<td>Pogrebnjak</td>
<td>+ 380 68 6529647</td>
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<tr>
<td>Ass. Prof.</td>
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<td><a href="mailto:serhiy.protsenko@elit.sumdu.edu.ua">serhiy.protsenko@elit.sumdu.edu.ua</a></td>
</tr>
</tbody>
</table>
Information for Participants

CONFERENCE SESSIONS

Will be held in the conference hall of the UkoopSpilka Hotel, 3A, Chatyrdağskaya Str., Alushta, Crimea, Ukraine. Information about possible amendments in the Conference Program will be available via the announcements at the Local Organizing Committee information desk or on the website http://nap.sumdu.edu.ua.

PRESENTATIONS

Invited reports – 40 min, review reports – 30 min, oral presentations – 20 min. Recommended size of poster is A0 (841 × 1189 mm)

LANGUAGE

English.

CONFERENCE PROCEEDINGS

The proceeding papers were published in the “Nanomaterials: Applications & Properties 1th NAP Proceedings” (Ed. A. Pogrebniak, T. Lyutyy, S. Protosenko) (2011) by the URSS Publishing ®. The authors can prepare their reports in the extended form and submit them as the full-length research articles for free publication in the Journal of Nano- and Electronic Physics www.jnep.sumdu.edu.ua.

TRANSPORT

For participants, who arrive to Crimea by plane, the following information may be helpful.

The international airport "Simferopol" is located 11 km north of Simferopol.

Address: 15, Aeroport Sq., pgt. Aeroflotskiy, Simferopol, Crimea, 95491, Ukraine
Tel: + 380 652 595 516
+ 380 652 595 308
Fax: + 380 652 274 343
E-mail: office@airport.crimea.ua
Web: www.airport.crimea.ua

You can reach the Hotel from the Airport by trolleybus. To this end You should use the trolleybus No 9 or 9a to get from the airport “Simferopol” to Railway Station (see the Maps 1, 2). Then You need to take the trolleybus No 51 or 52 and get Alushta, stop name is “Bus Terminal” (see Map 3). It will take You 1,5-2 hours. Then You can take the local trolleybus No 2 or bus No 12 to get the route trolleybus terminal (see Map 4). Finally, You can overcome the 1 km distance to the UkoopSpilka Hotel (see Map 4) on foot. Also you can take a taxi on the “Bus Terminal”.
Map 1 – International Airport “Simferopol” – Railway Station: Airport (1), Railway Station (2), Trolleybus stop (3)

Map 2 – Railway Station (2), Trolleybus stop (3)
Map 3 – Simferopol (1) – Alushta (2) Route

Map 4 – Trolleybus Station – Hotel Ukoopspilka Route: Trolleybus Terminal (1), Redisson Hotel, (2) Ukoopspilka Hotel (3)
Also you can use the route-taxi (approximately 40 UAH or 4 EUR) to get to the Bus Terminal in Alushta from the Simferopol Railway Station. And finally you always can take a taxi (approximately 250 UAH or 22 EUR) and get the Hotel from the Airport.

For participants, who arrive to Crimea by train, the following information may be helpful.

The Simferopol Railway Station is located in the city center.
Address: 5, Gor’kogo Str., Simferopol, Crimea, Ukraine
Tel: +380652663418
Web: www.uz.gov.ua

See the information above how to reach the UkoopSpilka Hotel from the Railway Station.

If you need a support with transfer to the Hotel, or you have any questions about transport, please, contact the Local Organizing Committee.

Cultural Program
Tuesday, 27 Sept.
20:00 Welcome Party

Wednesday, 28 Sept.
14:00 Excursion

Thursday, 30 Sept.
18:00 Banquet

Time Table of the Dining Hall
8:30-9:00 Breakfast
13:00-14:00 Lunch
19:00 Dinner
# Schedule of the Conference

**SEPTEMBER 26, MONDAY**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>Registration of the Participants</td>
</tr>
<tr>
<td></td>
<td>In the Meeting Room of the Dining Building</td>
</tr>
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</table>

**SEPTEMBER 27, TUESDAY**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>7:30 – 9:00</td>
<td>Registration of Participants</td>
</tr>
<tr>
<td>8:30</td>
<td>Breakfast</td>
</tr>
<tr>
<td>9:00 – 9:15</td>
<td>Official Opening of the Conference</td>
</tr>
<tr>
<td></td>
<td><strong>Prof. Alexander D. Pogrebnjak,</strong> Co-Chairman of the Conference, Sumy State University, Ukraine</td>
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</tbody>
</table>

**ORAL SESSION 1**

Chairmen: **Prof. J. Musil,**

**Prof. L. Shaginian**

**NANOSTRUCTURED FILMS AND COATING, NANOPARTICLES**

Plenary Report

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>9:20 – 10:00</td>
<td><strong>Prof. J. Musil</strong> (Czech Republic)</td>
</tr>
<tr>
<td></td>
<td>“Recent Progress in Hard Nanocomposite Coatings”</td>
</tr>
<tr>
<td>10:00 – 10:20</td>
<td>Report 1.1</td>
</tr>
<tr>
<td>10:20 – 10:40</td>
<td>Coffee/Tea Break</td>
</tr>
<tr>
<td></td>
<td>Plenary Report</td>
</tr>
<tr>
<td>10:40 – 11:20</td>
<td><strong>Prof. R. Andrievskii</strong> (Russia)</td>
</tr>
<tr>
<td></td>
<td>“Radiation Defects in Nanomaterials”</td>
</tr>
<tr>
<td>11:20 – 11:40</td>
<td>Report 1.2</td>
</tr>
<tr>
<td>11:40 – 12:00</td>
<td>Report 1.3</td>
</tr>
<tr>
<td>12:00 – 12:20</td>
<td>Report 1.4</td>
</tr>
<tr>
<td></td>
<td>Review Report</td>
</tr>
<tr>
<td>12:20 – 12:50</td>
<td><strong>Prof. L. Pranevichus</strong> (Lithuania)</td>
</tr>
<tr>
<td></td>
<td>“Tailoring of Surface Topography of Carbon Electrodes for Supercapacitors Using Plasma Technologies”</td>
</tr>
<tr>
<td>13:00 – 14:00</td>
<td>Lunch</td>
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<tr>
<td>14:00 – 14:20</td>
<td>Report 1.5</td>
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<tr>
<td>14:20 – 14:40</td>
<td>Report 1.6</td>
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<tr>
<td>14:40 – 15:00</td>
<td>Report 1.7</td>
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<tr>
<td>15:00 – 15:20</td>
<td>Report 1.8</td>
</tr>
<tr>
<td>15:20 – 15:40</td>
<td>Report 1.9</td>
</tr>
<tr>
<td>15:40 – 16:00</td>
<td>Coffee/Tea Break</td>
</tr>
<tr>
<td>16:00 – 16:20</td>
<td>Report 1.10</td>
</tr>
<tr>
<td>16:20 – 16:40</td>
<td>Report 1.11</td>
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<tr>
<td>16:40 – 17:00</td>
<td>Report 1.12</td>
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<tr>
<td>17:00 – 17:20</td>
<td>Report 1.13</td>
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<tr>
<td>17:20 – 17:40</td>
<td>Report 1.14</td>
</tr>
<tr>
<td>17:40 – 18:00</td>
<td>Report 1.15</td>
</tr>
</tbody>
</table>
ORAL SESSION 2  
Chairmens: Prof. F. Komarov, Dr. V. Kosyak

PROPERTIES AND CHARACTERIZATION OF FILMS AND SURFACES

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>18:00 – 18:20</td>
<td>Report 2.1</td>
</tr>
<tr>
<td>18:20 – 18:40</td>
<td>Report 2.2</td>
</tr>
<tr>
<td>18:40 – 19:00</td>
<td>Report 2.3</td>
</tr>
<tr>
<td>19:00 – 20:00</td>
<td>Dinner</td>
</tr>
<tr>
<td>20:00</td>
<td>Welcome Party</td>
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SEPTEMBER 28, WEDNESDAY

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:30</td>
<td>Breakfast</td>
</tr>
<tr>
<td>9:00 – 9:40</td>
<td>Plenary Report</td>
</tr>
<tr>
<td>9:00 – 9:40</td>
<td>Prof. G. Abadias (France)</td>
</tr>
<tr>
<td></td>
<td>“In Situ Stress Evolution During Growth of Transition Metal Nitride Films and Nanocomposites”</td>
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<tr>
<td>9:40 – 10:20</td>
<td>Plenary Report</td>
</tr>
<tr>
<td>9:40 – 10:20</td>
<td>Prof. R. Letfullin (USA)</td>
</tr>
<tr>
<td></td>
<td>“Application of Plasmonic Nanomaterials in Nanomedicine”</td>
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<tr>
<td>10:20 – 10:40</td>
<td>Coffee/Tea Break</td>
</tr>
<tr>
<td>10:40 – 11:00</td>
<td>Report 2.4</td>
</tr>
<tr>
<td>11:00 – 11:20</td>
<td>Report 2.5</td>
</tr>
<tr>
<td>11:20 – 11:40</td>
<td>Report 2.6</td>
</tr>
<tr>
<td>11:40 – 12:00</td>
<td>Report 2.7</td>
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<tr>
<td>12:00 – 12:20</td>
<td>Report 2.8</td>
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<tr>
<td>12:20 – 12:40</td>
<td>Report 2.9</td>
</tr>
<tr>
<td>12:40 – 13:00</td>
<td>Report 2.10</td>
</tr>
<tr>
<td>13:00 – 14:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00 – 18:00</td>
<td>Excursion</td>
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<tr>
<td>19:00</td>
<td>Dinner</td>
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</table>
SEPTEMBER 29, THURSDAY

8:30 Breakfast

ORAL SESSION 2 Chairmens: Prof. F. Komarov, Dr. V. Kosyak

PROPERTIES AND CHARACTERIZATION OF FILMS AND SURFACES
Invited Report
9:00 – 9:40 Prof. D. Gregory (UK)
“Inorganic Nanomaterials for Energy Applications”
Invited Report
9:40 – 10:20 Prof. Sh.-M. Chen (Taiwan)
“Applications of Nanostructured Materials and Biomolecules for Electro catalysis and Biosensors”

10:20 – 10:40 Coffee Break

CONSOLIDATED NANOMATERIALS
10:40 – 11:00 Report 2.11
THING FILMS
11:00 – 11:20 Report 2.12
11:20 – 11:40 Report 2.13
11:40 – 12:00 Report 2.14
12:00 – 12:20 Report 2.15

ORAL SESSION 3 Chairmens: Dr. G. Abadias, Prof. V. Uglov

RADIATION EFFECTS IN SOLIDS
12:20 – 12:40 Report 3.1
12:40 – 13:00 Report 3.2
13:00 – 14:00 Lunch
Review Report
14:00 – 14:30 Prof. A. Elekskii (Russia)
“Vacuum Electronics with Carbon Nanotube based Field Emission”
14:30 – 14:50 Report 3.3
14:50 – 15:10 Report 3.4
15:10 – 15:30 Report 3.5

ADVANCES IN EQUIPMENT AND TECHNOLOGIES
15:30 – 15:50 Report 3.6
15:50 – 16:10 Report 3.7
16:10 – 16:30 Report 3.8
16:30 – 16:50 Report 3.9
## POSTER SESSION 1
Chairmen: Prof. Shen-Ming Chen, Dr. L. Tamasauskaite

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>16:30 – 18:00</td>
<td>NEW MATERIALS IN ELECTRICAL ENGINEERING AND ELECTRONICS,</td>
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<tr>
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<td>ADVANCES IN EQUIPMENT AND TECHNOLOGIES,</td>
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<td>THIN FILMS,</td>
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<td>FUNCTIONAL COATING,</td>
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<td>CONSOLIDATED NANOMATERIALS,</td>
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<td>PROPERTIES AND CHARACTERIZATION OF FILMS</td>
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<tr>
<td></td>
<td>AND SURFACES,</td>
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<tr>
<td></td>
<td>MAGNETIC FINE PARTICLES</td>
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<tr>
<td>18:00</td>
<td>Banquet</td>
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### SEPTEMBER 30, FRIDAY

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<th>Time</th>
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<tbody>
<tr>
<td>8:30</td>
<td>Breakfast</td>
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<td></td>
<td><strong>ORAL SESSION 3</strong></td>
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<tr>
<td></td>
<td>Chairmen: Dr. R. Letfullin, Dr. T.V. Lyutyy</td>
</tr>
<tr>
<td>9:00</td>
<td>Invited Report</td>
</tr>
<tr>
<td>9:00 – 9:40</td>
<td>Prof. G.V. Yang (China)</td>
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<tr>
<td></td>
<td>“Laser Ablation in Liquid: From Nanocrystals Synthesis to</td>
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<td>Nanostructures Fabrication”</td>
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<tr>
<td>9:40</td>
<td>Review Report</td>
</tr>
<tr>
<td>9:40 – 10:20</td>
<td>Prof. O. Figovskii (Israel)</td>
</tr>
<tr>
<td></td>
<td>“Environment Friendly Industrial Nanotechnologies”</td>
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<tr>
<td>10:20</td>
<td>Coffee/Tea break</td>
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<td></td>
<td><strong>ADVANCES IN EQUIPMENT AND TECHNOLOGIES</strong></td>
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<tr>
<td>10:40</td>
<td>Report 3.10</td>
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<tr>
<td>11:00</td>
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<td>Report 3.12</td>
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<tr>
<td>11:40</td>
<td><strong>ORAL SESSION 4</strong></td>
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<tr>
<td></td>
<td>Chairmen: Prof. L. Pronevichas, Dr. A. Jagminas</td>
</tr>
<tr>
<td>11:40</td>
<td><strong>NEW MATERIALS IN ELECTRICAL ENGINEERING AND ELECTRONICS</strong></td>
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<tr>
<td>11:40 – 12:00</td>
<td>Report 4.1</td>
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<tr>
<td>12:00</td>
<td>Report 4.2</td>
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<tr>
<td>12:20</td>
<td>Report 4.3</td>
</tr>
<tr>
<td>12:40</td>
<td>Report 4.4</td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00</td>
<td>Report 4.5</td>
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</table>
14:20 – 14:40  Report 4.6
14:40 – 15:00  Report 4.7

NANOPOLYMERS, FULLERENES AND NANOTUBES

15:00 – 15:20  Report 4.8
15:20 – 15:40  Report 4.9
15:40 – 16:00  Report 4.10
16:00 – 16:20  Report 4.11
16:40 – 17:00  Report 4.12

MAGNETIC FINE PARTICLES

17:00 – 17:20  Report 4.13
17:20 – 17:40  Report 4.14

POSTER SESSION 2  Chairmens: Prof. J. Singh,
                   Prof. G.W. Yang

ION IMPLANTATION AND ION BEAM ASSISTED DEPOSITION,
NANOSTRUCTURED FILMS AND COATING,
NANOPARTICLES,

16:30 – 18:00  PLASMA AND IONS FOR SURFACE ENGINEERING,
RADIATION EFFECTS IN SOLIDS,
PROTECTIVE AND TRIBOLOGICAL COATING,
NANOPOLYMERS, FULLERENES AND NANOTUBES

18:00 – 18:30  Official Closing of the Conference
Content of the Conference

ORAL SESSION 1

NANOSTRUCTURED FILMS AND COATING, NANOPARTICLES

1.1 Characterization of TiAlN Coatings
   V.N. Denisov, B.N. Mavrin, E.A. Vinogradov, S.N. Polyakov, A.N. Kirichenko,

1.2 Forming the Strengthening Nanoparticles in the Co-Cr Based Coatings Deposited by
   Plasma Detonation on a Steel Substrate
   D.L. Alontseva, A.D. Pogrebnyak, N.V. Prokhorenkova, A.V. Russakova

1.3 The Effect of Pulse Parameters in Electro Deposition of Copper-Alumina Nano
   Composites
   Saaed Reza Allahkaram, Setareh Golroh, M. Morteza Mohamdalipour

1.4 Composite Inorganic Matrix Modified with Ion-Echanger Nanoparticles

1.5 Structural and Optical Investigations of Low Temperature Solution Based Synthesized
   ZnO and Ag Admix ZnO Nanoparticles (Nps)
   Jai Singh, P. Kumar, R.S. Tiwari, O.N. Srivastava

1.6 New Trends in the Crystallization of TiO₂ Nanotube Films
   A. Jagminas, E. Guzejevaitë-Gaidamauskienë, A. Selskas, G. Niaura

1.7 Stimulated Emission of CdSe/ZnS Nanocrystals in Polymer DFB Structure Obtained
   by Holographic Ordering of Polymer Nanocomposite
   T.N. Smirnova, P.V. Yezhov, L.M. Kokhtych, O.V. Sakhno, J. Stumpe

1.8 Nanostructured Thick Films Based on Spinel Ceramics
   H.I. Klym, I.V. Hadzaman, O.I. Shpotyuk

1.9 Influence of Power on Nanostructure of Magnetron Sputtered Aluminium Thin Film
   M. Novotny, J. Bulir, J. Lancok, P. Pokorny, J. Musil

1.10 Nanowire Fabrication on Cotton Surfaces: Effect of the Pretreatment
   V. Babaahmadi, M. Montazer, M. Ghanfarajfeh, T. Toliyat

1.11 Raman and PI Investigation of Light-Emitting Nc-Si-SiOₓ Nanostructures
   V.A. Dan’ko, I.Z. Indutnyi, K.V. Michailovska, P.E. Shepeliavyi, V.A. Yukhimchuk,
   T.E. Grinenko

1.12 IR, VIS, and UV Laser Light Irradiation of Amorphous Carbon Films
   A. Grigonis, Ž. Rutkūnienė, V. Vincūnaitė, R. Zabels, A. Medvid, A. Mičko

1.13 Synthesis and Investigation of Electronic Structure Features of Electroexplosive TiO₂
   and TiO₂:Ag
   A.P. Shpak, A.M. Korduban, V.A. Kandyba, T.V. Kryshchuk, M.M. Medvedskij,
   A.E. Pogorelov
1.14 Use of the Surface Nanostructuring for Improving the Items Structural Strength
*S.S. D’jachenko, I.V. Doshechekina, I.V. Ponomarenko, I.S. Tatarkina*

1.15 Nanowire Fabrication on Cotton Surfaces: Effect of the Pretreatment
*Roya Dastjerdi, V. Babaahmadi*

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**ORAL SESSION 2**

**PROPERTIES AND CHARACTERIZATION OF FILMS AND SURFACES**

2.1 Nanostructured Al Doped SnO$_2$ Films Grown onto Ito Substrate via Spray Pyrolysis Route
*M. Benhaliliba, C.E. Benouis, Y.S. Ocak*

2.2 Theoretical Study of 1 and 4 Benzoquinone and Difluoro Derivatives of Benzoquinone on Zinc Oxide Nano Particles by DFT Method
*Mohsen Oftadeh, Bahman Barati*

2.3 Band-Structure Analysis in (Ga, Mn)As Epitaxial Layers
*O. Yastrubchak, J. Žuk, L. Gluba, J.Z. Domagala, J. Sadowski, T. Wosinski*

2.4 Temperature Rise of Film Condensation Surface as a Phenomenon Intrinsic to Vacuum Deposition Methods
*L.R. Shaginyan*

2.5 Boosting Electrical Conductivity of Textiles Via Fabrication of Silver Nano-Ribbons Using the Fiber Templates
*Roya Dastjerdi, V. Babaahmadi*

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**ION IMPLANTATION AND ION BEAM ASSISTED DEPOSITION**

2.6 Effects of Annealing Regims on the Structural and Optical Properties of InAs and GaSb Nanocryctals Created by Ion-Beam Synthesis in Si Matrix

2.7 Oxygen Implantation and Behavior into Ti Thin Films from Water Vapor Plasma
*S. Tučkutė, L. Pranevičius, L. Pranevičius, M. Urbonavičius*

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**PLASMA AND IONS FOR SURFACE ENGINEERING**

2.8 Surface Topography Analysis of Water Vapor Plasma Irradiation Induced Effects in Ti Films
*K. Gedvilas, L.L. Pranevičius, D. Milcius*

2.9 Formation of Silicon-Based Nanostructures by Compression Plasma Flows
*Y.A. Petukhou, N.T. Kvasov, A.V. Punko, I.L. Doroshevich, V.V. Uglov, V.M. Astashynski, A.M. Kuzmitski*

2.10 Formation of Negative Ions in Magnetron Discharge
*P. Pokorný, J. Musil, J. Lancok, M. Novotny, J. Bulir*
CONSOLIDATED NANOMATERIALS

2.11 Cold-Spray Technique As Efficient Alternative Process for Consolidation of Powdered Al Fe-Cr Alloys Reinforced by Nanoquasicrystalline
   A.V. Byakova, A.I. Yurkova, V.V. Cherednichenko, A.I. Sirko

THIN FILMS

2.12 The bulk nanostructured materials on the base of high entropy alloys
   S.A. Firstov, V.F. Gorban, N.A. Krapushka, E.P. Pechkovskiy

2.13 Preparation and Characterization of Thin Films Derived from Polyelectrolyte-Surfactant Complexes Based on Cationic Polymer – JR-400 and Anionic Surfactant – Sodium
   S. Kudaibergenov, Z. Sadakbayeva, G. Tatykanova, A. Seitov, K. Abdullin

2.14 Nanostructured Carbon And TiAlN Coatings Deposition by Filtered Vacuum-Arc Method
   A. Aksenov, V. Belous, V. Strel’nit’skij

2.15 Magnetic and Magneto-Resistance Properties of Spin-Valves Based on Co and Cu or Au Film Systems
   M.H. Demydenko, D.M. Kostyuk, S.I. Protzenko

2.16 Thermal and Quantum Mechanical effects in Carbon Sp2 and Sp3 Atomic Rearrangements (Theory and Practical Application)
   S. Neuville

ORAL SESSION 3
RADIATION EFFECTS IN SOLIDS

3.1 Investigation on the Effects of Titanium Diboride Particle Size on Radiation Shielding Properties of Titanium Diboride Reinforced Boron Carbide-Silicon Carbide Composites
   Bulent Buyuk, A. Beril Tugrul, A. Cem Akarsu, A. Okan Addemir

3.2 Critical Exponents in Percolation Model of Track Regions with Different Depth Distribution
   A. Demchynshyn, P. Selyshchev

3.3 Influence of Migration the Radiation-Induced Excitations in Hetero-Fullerens C_{58}Si_{2} and C_{68}Si_{2} of their probability of Damage
   M.V. Kobets, P.A. Selyshchev

3.4 Porous Matrixes Based on Ion-Irradiated Polymer as Templates for Synthesis of Nanowires
   D. Zagorskiy, S. Bedin, V. Korotkov, V. Kudravtsev, V. Oleinikov, P. Ershov, A. Vilenski

3.5 Surface Modification of ZnO and TiO_{2} Nanoparticles under Mild Hydrothermal Conditions
   Behzad Shahmoradi, Afshin Maleki
ADVANCES IN EQUIPMENT AND TECHNOLOGIES

3.6 Nuclear and Related Analytical Techniques for Bio-Nano-Technology
  M.V. Frontasyeva

3.7 Solid Transformations as a Variant of Three-Dimension Nanotechnology
  V.N. Belomestnykh, E.P. Tesleva

3.8 Nanosize Phases Formation under Low Carbon Steel Thermomechanical Strengthening
  V.E. Gromov, Yu.F. Ivanov, V.B. Kosterev, S.V. Konovalov

3.9 Spectrographs for Analyzing Nanomaterials
  N.K. Pavlycheva, M.A. Hassan

3.10 Synthesis, Characterization and Performance Study of Phosphosilicate Gel-Sulfonated
  Poly (Ether Ether Ketone) Nanocomposite Membrane
  Ch. Dhole, A. Nando, K. Kargupta, S. Ganguly

3.11 Spark Plasma Sintering the Spark Erosion Powders of Functional Alloys
  G.E. Monastyrsky, A.V. Gilchuk, P. Ochin, V.I. Kolomytsev, Y.N. Koval

3.12 Application of Simulation Technologies to the Investigation of the Beam Generating
  Systems
  I.V. Barsuk, A. V. Bondar, G. S. Vorobjov, A. A. Drozdenko

ORAL SESSION 4

NEW MATERIALS IN ELECTRICAL ENGINEERING AND ELECTRONICS

4.1 T-X-Y Diagrams of Lead-Free Soldering Systems with Thermodynamic Contours of
  Minimal Surfaces
  V.I. Lutsyk

4.2 Thermal Reversible Breakdown and Resistivity Switching in Hafnium
  M.A. Danilyuk, D.B. Migas, A.L. Danilyuk, V.E. Borisenko, Xing. Wu,
  Naga Raghavan, Kin-Leong Pey

4.3 Numerical Study of Negative-Refractive Index Ferrite Waveguide
  Muin F. Ubeid, Mohammed M. Shabat, Mohammed O. Sid-Ahmed

  Ye.V. Salomatina, L.A. Smirnova, A.V. Markin, A.P. Aleksandrov, N.M. Bityurin

4.5 Advanced Nanostructured Anode Materials for Lithium-Ion Batteries
  V.G. Khomenko, I.V. Senyk, V.Z. Barsukov

4.6 Properties of Co/Ni Co-doped ZnO Based Nanocrystalline Diluted Magnetic
  Semiconductor (DMS)
  Shafikuddin Mollah, Rezq Naji Aljawfi

4.7 Fermi Level of Carriers in the Volume Filling Defects Structure Based on Heat-
  Resistant Metals
  V.I. Marenkov
NANOPOLYMERS, FULLERENES AND NANOTUBES

4.8 Comparison of the Structural Configuration of Co Nanoparticles on TiO$_2$ and TNT Supports
   *Ayo Samuel Afolabi, Ambali Saka Abdulkareem, Marcus Mabusela Malose, Edson Muzenda*

4.9 Nano Porous Foamed Ag-CNTs for Intercalation of Lithium
   *B. Khoshnevisan, M. Gashtasebi*

4.10 Hydrogenation of Carbon Nanostructured Materials by the Direct Reaction with Molecular
   *S.M. Luzan, Yu.O. Tsybin, A.V. Talzyin*

4.11 Exciplexes of Fullerene C$_{60}$ with Aromatic Solvents
   *I.A. Ar’ev, N.I. Lebovka, V.M. Ogenko, I.I. Tokmenko*

4.12 Positron Lifetime and Coincidence Doppler Broadening Studies of Graphene Oxide-Polyaniline Nanocomposite
   *U. Rana, S. Malik, K. Chakrabarti, P.M.G. Nambissan*

MAGNETIC FINE PARTICLES

4.13 Exact Ground States for Quasi 1D Systems with Hubbard Interaction
   *E. Kovács, Z. Gulácsi*

   *Mehdi Rahimi-Nasrabadi, Morteza Kalilian-Shalamzari, Seied Mehdi Pourmortazavi*

POSTER SESSION 1
NEW MATERIALS IN ELECTRICAL ENGINEERING AND ELECTRONICS

P1.1 Spin Current in (110)-oriented GaAs Quantum Wells
   *V.I. Ivanov, V. Dugaev, E. Sherman, J. Barnas*

P1.2 Nanostructured Metal-Fullerene Field Emission Cathode
   *M. Popov, A. Volkov, S. Buga, V. Bormashov, K. Kondrashov, R. Lomakin, N. Luparev, V. Medvedev, S. Tarelkin, S. Perfilov*

P1.3 Electrical Properties of New Polymeric Metal Complexes
   *Fatma Siga, Hamdi Temel, Salih Pasa, Yusuf Selim Ocak, Kemal Akkalic*

P1.4 Chemo-EMF in the Silicon Solar Cell Exposed to low energy Hydrogen Atoms
   *V.V. Styrov, S.V. Simchenko, V.N. Golotyuk*

P1.5 Optical Properties of the Window Layers for the CZTSe and CZTS Based Solar Cells
   *A.S. Opanasyuk, M.M. Ivashenko, V.V. Kosyak, D.I. Kurbatov, I.Yu. Protsenko, Hyeonsik Cheong*
P1.6 Growth and Characterization of AlGaN/GaN Heterostructures for Electronic Devices and Sensors

P1.7 New Fabrication Approach To ZnO Multiple Nanofiber Sensors

P1.8 A Study of Inelastic Electron-Phonon Interaction on Tunneling Magnetoresistance in Polyacetylene
   Mahmood Rezaee Roknabadi, Mohamadreza Pahlevane, Moshen Modarresi

P1.9 Asphaltens of Oil and of Hydrocarbons Distillates as Nanoscale Semiconductors
   M.Yu. Dolomatov, S.V. Dezortsev, S. Shutkova

P1.10 Many Body Effects on the Transport Properties of a Doped Nano Device
   M. Modarresi, M.R. Roknabadi, N. Shahtahmasebi, M. Mirhabibi

P1.11 Structure of Quantum Levels for Two-Dimensional Electron in the Homogeneous Magnetic Field and the Potential Confining Near to the Ring
   A.V. Bunyakin, A.A. Vasilchenko

P1.12 Investigation of Potential Function of Inner Rotation in Biphenyl
   A.V. Dmitriyev, Yu.M. Lopatkin, P.A. Kondratenko

P1.13 Comparison of Parameters Of Semiconductor Memories Produced By 65 nm, 45 Nm and 25 nm Technologies
   J. Partyka

ADVANCES IN EQUIPMENT AND TECHNOLOGIES

P1.14 Optical Monitoring of Technological Processes for Fabrication of Thin-Film Nanostructures

P1.15 Production of SnO₂ Nanoparticles by Hydrogel Thermal Decomposition Method
   P. Jajarmi, S. Barzegar, G.R. Ebrahimi, N. Varahram

P1.16 Preparation Nano Sized HMX by Using Ultrasonic Waves
   Yadollah Bayat, Seyed Hamed Mousavi, Fatemeh Bayat, Gholamhossein Rastegar Nasab, Tahereh Gholamhosseini

P1.17 Microbial Synthesis of Silver Nanoparticles by Streptomyces Glauces and Spirulina Platensis

P1.18 X-Ray Dynamical Diffractometry Of The Defect Structure Of Garnet Crystals
   T.P. Vladimirova, V.M. Pylypyv, B.K. Oстafiyчuk, Ye.M. Kyslovskyy, V.B. Molodkin, S.I. Olikhovskii, O.V. Reshetnyk, E.S. Skakunova, S.V. Lizunova
Dynamical Diffractometry of Structural Defects and Strains in Garnet Film System

O.S. Skakunova, V.M. Pylypiv, T.P. Vladimirova, V.B. Molodkin, B.K. Ostafiychuk, Ye.M. Kyslovskyy, S.I. Olikhovskii, O.V. Reshetnyk

Physical Principles of the Multiparametric Crystallography: Characterization of Defects of Several Types in Single-Crystalline Materials and Nanotechnology Products

V.V. Lizunov, V.B. Molodkin, E.G. Len, S.V. Lizunova, V.V. Molodkin

The Model of the Multiparametric Diffuse-Dynamical Combined Diffractometry of Multilayer Systems with Defects

S.V. Lizunova, V.B. Molodkin, E.S. Skakunova

Strain Resistive Properties of Films on The Basis of Copper and Cobalt

S.I. Protsenko, O.V. Fedchenko

The Annealing Effects of ZnO Thin Films on Characteristic Parameters of Au/ZnO Schottky Contacts on N-Si

K. Akkilic, Y.S. Ocak, T. Kilicoglu, A. Toprak

MTJ Properties Modification

A.V. Filatov, A.E. Pogorelov

Electrical and Optical Properties of ZnO:Al Films Prepared by Chemical Vapour Deposition (CVD)

A.D. Pogrebnjak, N.Y. Jamil, A.M. Muhammed

High-Temperature Surface Diffusion of Copper on the (112) Face of Tungsten under Condition of Film-Layer Growth of Adsorbed Film

S.A. Zaika, A.T. Loburets, A.G. Naumovets

Investigation of the Epitaxial Growth of AlIIIIBV-N Heterostructures for Solar Cell Applications


Magnetic Properties of Fe/Cu Multilayers Prepared Using Pulsed-Current Electrodeposition

C. Rizal, Yu. Ueda, B.R. Karki

Forming and Structure of Cilicide Thin Films

N.A. Azarenkov, V.M. Beresnev, V.A. Chushkala, S.V. Lutovchenko, L.V. Cravnova

Properties of Titanium Powder Coatings Deposited on a Substrate of Steel-1030

M.Y. Arseenko, M.G. Kovaleva, M.C. Prozorova, Yu.N. Tyurin
# CONSOLIDATED NANOMATERIALS

P1.31 Structural Changes in Friction-Stir Welded Al-Li-Cu-Sc-Zr (1460) Alloy  
*A.L. Berezina, N.N. Budarina, A.V. Kotko, O.A. Molebny, A.A. Chayka, A.Ya. Ischenko*

P1.32 High Pressure Torsion of Nickel Powders Obtained by Electrodeposition  
*L.D. Rafailović, A. Gavrilović, C. Kleber, C. Rentenberger, P. Kramhler C. Gammer*

P1.33 Improving Thermo-Mechanical Properties of Tabular Alumina Castables via Using Nano Structured Colloidal Silica  
*Alireza Souri, Fatemeh Kashani Nia, Hossein Sarpovalky*

P1.34 Consolidated Materials Based on Al₂O₃-ZrO₂-TiCN System for Tool Applications  
*Ya. Dyatlova, S. Boykov, S. Ordanyan, V. Rumyantsev*

P1.35 Ultrafine Grain Refinement of Iron Induced by Severe Plastic Deformation in Assistance of Multi-Directional Deformation Mode  
*A.I. Yurkova, A.V. Byakova, M. Gricenko*

P1.36 Determination of Effective Diffusion Coefficients for Inhomogeneous Media  
*Yu.O. Lyashenko, L.I. Gladka*

# PROPERTIES AND CHARACTERIZATION OF FILMS AND SURFACES

P1.37 Magneto-Deformation Effect in Double-Film Systems  
*A.M. Chornous, L.V. Odnodvorets, S.I. Protsenko, I.Yu. Protsenko*

P1.38 Surface Layers by Wear Tests of Particulate Metal Matrix Composites  
*P.A. Bykov, T.A. Chernysheva, L.I. Kobeleva*

P1.39 Labile Collagen Matrix: Transformation of Hierarchical Structure on Nano and Micro-Levels Influenced by Chemical Treatment  
*Y.S. Dzyazko, E.R. Mokrousova, Y.M. Volfkovich, V.E. Sosenkin, N.F. Nikolskaya*

P1.40 Hybrid Organic-Inorganic Nanocomposites for Ion-Exchange Processes  
*Y.S. Dzyazko, L.N. Ponomareva, Y.M. Volfkovich, V.N. Belyakov, V.E. Sosenkin, N.F. Nikolskaya, N.N. Scherbatyuk, Y.A. Litvinenko*

P1.41 Spectroscopic Analysis of Thin Films Fabricated from Benzanthrone Luminescent Dye  
*G.K. Kirilov, A. S. Bulanov, M. Fleisher, E. M. Kirilova, I. Mihailova*

P1.42 Temperature Dependence of Resistivity of Porous Silicon Formed on N+ Substrates  
*S.V. Redko, E.B. Chubenko, A.A. Klyshko, K.I. Kholostov, V.P. Bondarenko, S.L. Prischepa, M.T. Carla, C.C. Attanasio*

P1.43 Structural Features of Forming of Films of Diborides of Transitional Metals  
*A.A. Goncharov*

P1.44 Angular-Resolved Elastic Peak Electron Spectroscopy for Analysis of Nanoscale Solids  
*V.T. Barchenko, V.V. Luchinin, O.I. Grebnev, V.P. Pronin, I.V. Ryzhov*
P1.45 Investigation of the Self-Similar Structure of the Carbon Thin Films
   V. Borisyuk

P1.46 Investigation of NanoPt(Ni)/Ti as Electrocatalysts for Alkaline Fuel Cells
   L. Tamašauskaitė-Tamašiūnaitė, A. Balčiūnaitė, A. Vaiciuкеvičienė, A. Selskis

P1.47 Properties of Nanostructured Composite Powder Coating
   M.S. Prozorova, Yu.N. Tyurin, M.G. Kovaleva, M.Y. Arseenko

P1.48 Structural Analysis of Carbon Films Deposited from Argon-Acetylene Gas Mixtures
   L. Marcinauskas, A. Grigonis, P. Valatkevičius

P1.49 Nanostructured NaBiTe₂ Thin Films and Their Properties
   V.I. Bilozertseva, D.A. Gaman, H.M. Khlyap, A.A. Mamalui, N.L. Dyakonenko, L.G. Petrenko

P1.50 The Influence of Temperature on Electric Conductivity Mechanisms in Boron-Doped Silicon Implanted with Ne+ Ions
   P. Wegierek

P1.51 Corundum Ceramics with Improved Mechanical Properties
   N.A. Azarenkov, V.M. Beresnev, V.A. Chushkala, V.V. Ivanisenko, S.V. Lutovchenko

MAGNETIC FINE PARTICLES

P1.52 Development Methods Labeled Technetium-99m Magnetically Nanocolloids for Medical Diagnosis

P1.53 Structure and the Magnetoresistive Properties of the Nanoparticles Pr₀.₆Sr₀.₃Mn₁.₁O₃₊Δ

P1.54 Lifetime of the Precession Mode of a Nanoparticle Magnetic Moment in a Rotating Magnetic Field
   S.I. Denisov, A.Yu. Polyakov, T.V. Lyutyy

P1.55 Saturation Magnetization and Phase Composition of Synthesized Magnetic Nanoparticles
   N.O. Dudchenko, V.P. Ivanitskyy, A.B. Brik

P1.56 Influence of the Inverse Faraday Effect on Switching and Oscillations of Magnetization in Single-Domain Nanoparticles
   A.V. Kukharev, A.L. Daniluyk

P1.57 Magnetic Nanoparticles Combined with Natural Protein Fibres
   A.A. Arshakuni, S.P. Gubin, Yu.A. Koksharov
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ION IMPLANTATION AND ION BEAM ASSISTED DEPOSITION

P2.1 A Structure and Physical Properties of Ni Films in Metastable States

P2.2 Investigation of Structure and Properties of Bury Barrier Layers at Low Energy Carbon and Oxygen Ions
K.A. Kuterbekov, T.N. Nurachmetov, S.B. Kislityn

NANOSTRUCUTURED FILMS AND COATING, NANOPARTICLES

P2.3 Dispersed Co Thin Films on Polyimide Substrate
V. Zlenko, S. Protosenko

P2.4 Corrosion Resistance of AZ91 Magnesium Alloy with Pulse Electrodeposited Ni-SiC Nanocomposite Coating
Mohammad Hajiali Fini, Ahmad Ali Amadeh

P2.5 Thermal Decomposition Route for Synthesis YBa$_2$Cu$_3$O$_{7-x}$
Masoud Salavati Niasari, S. Alikhanzadeh Arani

P2.6 Synthesis, Characterization, and Photocatalysis Properties of Cr/TiO$_2$ as Visible Light Photocatalyst
Masood Hamadanian Khozani, Reza Sadeghi Sarabi, Ali Mohammadi Mehra

P2.7 The Analysis of Al$_2$O$_3$ Coatings Obtained by Magnetron Sputtering
A.D. Pogrebnjak, M.V. Iljashenko, A.Sh. Kaverina, I.V. Yakushchenko

P2.8 Superhard Nanostructured Coatings Based on Ti-Hf-Si-N Their Properties and Structure
A.D. Pogrebnjak, M.V. Kaverin, I.V. Yakyschenko, A.P. Shpak, V.M. Beresnev, V.V. Grudnitskii, F.F. Komarov, V.V. Uglov, P. Konarski, N.A. Makhmudov, D.A. Kolesnikov

P2.9 Physical, Mechanical Properties and Thermal Annealing of Hard and Superhard Zr-Ti-Si-N Coatings
A.D. Pogrebnjak, M.A. Mahmood, A.A. Demianenko, V.S. Baidak, V.M. Beresnev, A.P. Shypylenko, V.V. Grudnitskii

P2.10 Phase Composition and Physical Properties of Co-Cr Base Coating

P2.11 Structural Peculiarities and Some Electrical-and-Physical Properties of Bismuth Oxide and Antimony Trichloride and Tribromide
K.R. Kurbanova, N.N. Kurbanova

P2.12 Thermal Stability of Film Nanostructure of High-Melting Compounds
A.V. Agulov, A.A. Goncharo, A.I. Bazhin, V.A. Stupak, U.V. Kudelin, S.A. Goncharova, V.A. Turchenko
P2.13 Heterogeneous Nucleation and Depletion Effect in Nanowire Growth

O. Liashenko, A. Gusak

P2.14 Investigation of Tertiary Amines Effects On Structural, Morphological and Optical Properties of Nanostructured ZnO Thin Film

Reza Ebrahimifard, Mohammad Reza Golobostanfard, Hossein Abdizadeh

P2.15 Preparation of Gold and Silver Nanoparticles by Mechanochemical Activation

G.S. Tatykhanova, Zh. Mukazhanova, E. Baigazieva, M. Yashkarova, L. Orazzhanova, K. Abdullin, S. Kudaibergenov

P2.16 Quantum-Size Effects in Nanostructures on the Base of Compounds IV-VI

D. Freik, I. Yurchyshyn, V. Bachuk, L. Harun, Y. Lysiuk

P2.17 Modification of Surfaces by Functional Silicones

E.N. Rodlovskaya, B.A. Izmailov, V.A. Vasnev, E.S. Mishina

P2.18 Effect of CuS Nanoparticles as Filler on the Thermal Stability ABS

Masoud Salavati Niasari

P2.19 Multilayer Vacuum-Arc Coatings Ti-Mo-N Production and Study

A.A. Andreev, O.V. Sobol, V.F. Gorban, V.A. Stolbovoy, I.V. Serdyuk

P2.20 Formation of Metal Nanoparticles on Nonmetal Substrates for Heterogeneous Nanocatalysts

S.V. Tomilin, A.S. Yanovsky

P2.21 Structure and Mechanical Characteristics of Vacuum-Arc Tin Coatings Deposited with High-Voltage High Frequency Pulses on the Substrate

O.V. Sobol, A.A. Andreev, S.N. Grigorev, V.F. Gorban, M.A. Volosova, S.V. Aleshin, V.A. Stolbovoy

P2.22 Friction Force for Boundary Lubrication

I.A. Lyashenko

P2.23 Comparative First-Principles Molecular Dynamics Study of Tin(001)/Sin/Tin(001) and Tin(001)/Sic/Tin(001) Interfaces in Superhard Nanocomposites

V.I. Ivashchenko, S. Veprek, V. Shevchenko

P2.24 Electrophoretic Deposition of TiO₂ Nanoparticles: a Comparison Between the Patterns Obtained in Methanol and Pentanol

T. Ebadzadeh, A. A. Sadeghi, B. Raissi, M. Fateminia

P2.25 Formation and Decomposition of the Anomalous Supersaturated Solid Solution of Aluminium Alloys Alloyed with Sc and Zr

A.L. Berezina, T.O. Monastyrska, O.A. Moleby, V.K. Nosenko, A.V. Kotko

P2.26 Synthesis of Cadmium Sulfide Nanostructures by Novel Precursor

Masoud Salavati Niasari

P2.27 Novel Precursors in Preparation and Characterization of Nanosuper-conductor YBa₂Cu₃O₇₋ₓ

S. Alikhanzadeh Arani, Masoud Salavati Niasari

P2.28 Synthesis of Bimetal Nanocomposites Based on Palladium with Transition Metals

S.N. Shishkina, R.L. Galan, B.F. Minaev
P2.29 Properties of Nanostructured Composite Titanium Coating on Aluminium Surface

Yu.N. Tyurin, O. Ivanov, O. Kolisnichenko, M. Kovaleva, I. Duda, O. Maradudina, Y. Trusova

PLASMA AND IONS FOR SURFACE ENGINEERING

P2.30 Effect of Ion Flux Parameters on the Rate of Austenitic Stainless Steel Nitriding in Electron Beam Generate

N.V. Gavrilov, A.I. Menshakov

P2.31 Vacuum Arc Discharge on Integrally Cold Cathode

A.A. Lisenkov, V.P. Valuev, V.T. Barchenko, O.I. Grebnev, N.V. Krupovich

P2.32 Layered Semiconductor InSe as a Standard Nanorelief in the Metrology of Nanoobjects

A.I. Dmitriev

P2.33 Inductive-Type Properties Of (CoFeZr) \times (Al_{2}O_{3})_{100-x} Nanocomposites Produced By The Ion-Beam Sputtering in the Argon and Oxygen Ambient

T.N. Koltunowicz

RADIATION EFFECTS IN SOLIDS

P2.34 Investigation of the Nanostructures Formation in the Irradiated by γ – Quanta Single-Crystal Silicon With Ultrasonic Method

T. Khaydarov, I.Kh. Abdukadirova, Yu. Karimov

P2.35 Radiation Effects in Nanosized Clusters

V.M. Astashynski, I.L. Doroshevich, N.T. Kvasov, A. Yury, A. Petukhou, V. Punko, V.V. Uglov

P2.36 Peculiarities of Generation and Transport of Structural Defects Induced by the Laser Irradiation

A.E. Pogorelov

P2.37 “Etchability” of Ion Tracks in SiO_{2}/Si and Si_{3}N_{4}/Si Thin Layers

L. Vlasukova, F. Komarov, V. Yuvchenko, V. Skuratov

P2.38 Influence of High Reactor Irradiation on Some Parameters of Al_{2}O_{3} Crystals and Process Generation of a Several Points

I.Kh. Abdukadyrova

P2.39 X-Ray and Raman Investigations of Layered InSe and GaSe Single Crystals Irradiated with High-Energy Gamma-Quanta

Z.D. Kovalyuk, V.G. Tkachenko, I.M. Maksymchuk, O.M. Sydor, O.A. Sydor, V.I. Dubinko

P2.40 Temperature Dependence of a Period of the Modulated Structure in Atom-Vacancy Solid Solution

O.V. Oliinyk, V.A. Tatarenko

P2.41 Influence of γ-Irradiation on Optical Properties of Gase Crystals

Yu.I. Zhirkov, N.A. Skubenko, V.I. Dubinko, Z.D. Kovalyuk, O.M. Sydor
PROTECTIVE AND TRIBOLOGICAL COATING

P2.42 DLC Deposition by PECVD at Plasma Cathode Based Low-Pressure
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PROGRAM

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