

## **Ab initio calculations of elastic properties of isotropic and oriented Ti(1-x)AlxN hard coatings**

**Podgurski, Vitali** Journal of physics D : applied physics 2007 / 13, p. 4021-4026

## **Adaptive wear mechanisms of diamond coatings at room and elevated temperatures = Teemantpinnete adaptiivkulumise mehhanismid toa- ja kõrgendatud temperatuuridel**

**Yashin, Maxim** 2019 <https://digikogu.taltech.ee/et/Item/6cb35baa-eb31-42e2-8134-3235c7f796ef> [https://www.ester.ee/record=b5283072\\*est](https://www.ester.ee/record=b5283072*est)

## **Advanced machine learning and experimental studies of polypropylene based polyesters tribological composite systems for sustainable recycling automation and digitalization**

**Hussain, Abrar; Kübarsepp, Jakob; Sergejev, Fjodor; Goljandin, Dmitri; Hussainova, Irina; Podgurski, Vitali; Karjust, Kristo; Maurya, Himanshu Singh; Rahmani Ahranjani, Ramin; Sinka, Maris** International journal of lightweight materials and manufacture 2025 / p. 252-263 <https://doi.org/10.1016/j.jlmm.2024.11.001>

## **ArF laser ablation deposited NdFeB films on silicon**

**Kruusing, Arvi; Podgurski, Vitali** International DAAAM : [DAAAM National Estonia] : proceedings of the 1st International Conference, 25-27th September 1997, Tallinn, Estonia 1997 / p. 156-159: ill

## **Changes in surface morphology, deflection and wear of microcrystalline diamond film observed during sliding tests against Si<sub>3</sub>N<sub>4</sub> balls**

**Bogatov, Andrei; Traksmaa, Rainer; Podgurski, Vitali** Engineering materials and tribology : selected, peer reviewed papers from the 24th International Baltic Conference on Engineering Materials & Tribology (BALTMATRIB & IFHTSE 2015), November 5-6, 2015, Tallinn, Estonia 2016 / p. 145-151 : ill <https://doi.org/10.4028/www.scientific.net/KEM.674.145> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

## **Circular economy approach to recycling technologies of post-consumer textile waste in Estonia : a review**

**Hussain, Abrar; Kamboj, Nikhil Kumar; Podgurski, Vitali; Antonov, Maksim; Goljandin, Dmitri** Proceedings of the Estonian Academy of Sciences 2021 / p. 80-90 : ill <https://doi.org/10.3176/proc.2021.1.07> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Circular production, designing, and mechanical testing of polypropylene-based reinforced composite materials : statistical analysis for potential automotive and nuclear applications**

**Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Antonov, Maksim; Sergejev, Fjodor; Krasnou, Illia** Polymers 2023 / art. 3410, 30 p. : ill <https://doi.org/10.3390/polym15163410> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Co on thin Al<sub>2</sub>O<sub>3</sub> films grown on Ni<sub>3</sub>Al(1 0 0)**

**Podgurski, Vitali; Costina, Ioan; Franchy, R.** Surface science 2003 / p. 419-427 <https://www.sciencedirect.com/science/article/pii/S0039602803000815>

## **Coatings and surface engineering. Industry oriented research**

**Veinthal, Renno; Kulu, Priit; Zikin, Arkadi; Sarjas, Heikki; Antonov, Maksim; Podgurski, Vitali; Adoberg, Eron** Estonian journal of engineering 2012 / p. 176-184 : ill [https://kirj.ee/public/Engineering/2012/issue\\_3/Eng-2012-3-176-184.pdf](https://kirj.ee/public/Engineering/2012/issue_3/Eng-2012-3-176-184.pdf)

## **Color center fluorescence and spin manipulation in single crystal, pyramidal diamond tips**

**Nelz, Richard; Fuchs, Philipp; Podgurski, Vitali** Applied physics letters 2016 / p. 193105-1 - 193105-4 : ill <https://doi.org/10.1063/1.4967189> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Comparative analyses of tribological behavior of ultra nanocrystalline diamond films prepared on different substrates [Online resource]**

**Yashin, Maxim; Bogatov, Andrei; Podgurski, Vitali; Sahul, Martin; Čaplovič, Lubomir** Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [4.-5. veebr. 2019, Tartu : teesid] 2019 / 1 p <http://fntdk.ut.ee/teesid-2019/>

## **Comparative analysis of two methods for evaluating wear rate of nanocrystalline diamond films**

**Bogatov, Andrei; Yashin, Maxim; Viljus, Mart; Menezes, Pradeep; Podgurski, Vitali** Engineering materials and tribology XXV 2017 / p. 345-350 : ill <https://doi.org/10.4028/www.scientific.net/KEM.721.345> [Conference proceedings at Scopus](#) [Article at Scopus](#)

## **Comparative analysis of wear rates of microcrystalline diamond and diamond-like carbon coatings deposited on WC-Co substrates**

**Yashin, Maxim; Bogatov, Andrei; Podgurski, Vitali** Engineering materials and tribology XXV 2017 / p. 436-440 : ill <https://doi.org/10.4028/www.scientific.net/KEM.721.436> [Conference proceedings at Scopus](#) [Article at Scopus](#)

## **Comparative study of surface roughness and tribological behavior during running-in period of hard coatings deposited by lateral rotating cathode arc**

**Podgurski, Vitali; Nisumaa, Reet; Adoberg, Eron; Surženkov, Andrei; Sivitski, Alina; Kulu, Priit** Wear 2010 / p. 751-755 : ill

**A comparative study of the growth dynamics and tribological properties of nanocrystalline diamond films deposited on the (110) single crystal diamond and Si(100) substrates**

**Podgurski, Vitali; Bogatov, Andrei; Yashin, Maxim; Viljus, Mart; Volobujeva, Olga; Mere, Arvo; Raadik, Taavi** Diamond and related materials 2019 / p. 159-167 : ill <https://doi.org/10.1016/j.diamond.2018.12.024> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Congruent laser ablation due to pre-irradiation of target**

**Podgurski, Vitali; Friesel, M.** Physica C 2000 / p. 49-52 : ill

**Contact-mode scanning tunneling microscopy experimental technique employed for tunneling magnetoresistance measurements**

**Podgurski, Vitali; Adam, R.; Teske, M.; Krämer, Martina; Franchy, R.** Review of scientific instruments 2006 / p. 033906-1 - 033906-3 : ill

**Dependence of the friction coefficient on roughness parameters during early stage fretting of (Al,Ti)N coated surfaces**

**Podgurski, Vitali; Adoberg, Eron; Surženkov, Andrei; Kimmari, Eduard; Viljus, Mart; Mikli, Valdek; Hartelt, M.; Wäsche, R.; Šima, M.; Kulu, Priit** Wear 2011 / p. 853-858 : ill <https://www.sciencedirect.com/science/article/abs/pii/S0043164811001815>

**Development of experimental set-up for the investigation of photoelectric response of the pyroelectric crystal to short pulses of the Hg(Xe) lamp**

**Podgurski, Vitali; Land, Raul; Bogatov, Andrei; Vlasov, A.; Nagorny, A.; Tiik, K.** Journal of optoelectronics and advanced materials 2024 / p. 243 - 245 <https://joam.inoe.ro/articles/development-of-experimental-set-up-for-the-investigation-of-photoelectric-response-of-the-pyroelectric-crystal-to-short-pulses-of-the-hgxe-lamp/fulltext> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Development of sustainable polypropylene based composites = Polüpropeeni baasil jätkusuutlike komposiitide arendus**

**Hussain, Abrar** 2023 <https://doi.org/10.23658/taltech.64/2023> <https://digikogu.taltech.ee/et/Item/ffead123-ec1c-4d27-baa6-ed82c6d527cc> [https://www.ester.ee/record=b5645373\\*est](https://www.ester.ee/record=b5645373*est) [https://www.ester.ee/record=b5645373\\*est](https://www.ester.ee/record=b5645373*est)

**Diamond-like carbon coatings on NdFeB magnets**

**Kruusing, Arvi; Podgurski, Vitali; Osvet, Andres; Herranen, Merja** Proceedings of the Estonian Academy of Sciences. Engineering 1998 / 1, p. 26-33: ill

**Effect of nanocrystalline diamond films deflection on wear observed in reciprocating sliding tests**

**Podgurski, Vitali; Bogatov, Andrei; Sobolev, S.; Viljus, Mart; Sedov, V.; Ashkinazi, E.; Ralchenko, V.** Journal of coating science and technology 2016 / p. 109-115 : ill <http://dx.doi.org/10.6000/2369-3355.2016.03.03.2>

**Electrochemical behaviour of TiCN and TiAlN gradient coatings prepared by lateral rotating cathode arc PVD technology**

**Baroninš, Janis; Podgurski, Vitali; Antonov, Maksim; Bereznev, Sergei; Hussainova, Irina** Engineering materials and tribology XXV 2017 / p. 414-418 <https://doi.org/10.4028/www.scientific.net/KEM.721.414> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Evaluation of wear rate of nanocrystalline diamond films using Abbott curve**

**Bogatov, Andrei; Podgurski, Vitali** Materials Engineering 2017 : selected, peer reviewed papers from the 26th International Baltic Conference on Materials Engineering 2017, October 26-27, Kaunas, Lithuania 2017 / p. 185-189 : ill <https://doi.org/10.4028/www.scientific.net/SSP.267.185> [Conference proceedings at Scopus](#) [Article at Scopus](#)

**Evolution of TiN coating surface roughness during physical vapor deposition on high speed steel substrate**

**Kupchenko, Leonid; Tali, Rauno; Adoberg, Eron; Mikli, Valdek; Podgurski, Vitali** Engineering materials & tribology XXII 2014 / p. 67-70 <https://doi.org/10.4028/www.scientific.net/KEM.604.67> [Conference proceedings at Scopus](#) [Article at Scopus](#)

**Experimental damage mechanics of cotton wastes**

**Hussain, Abrar; Podgurski, Vitali; Antonov, Maksim; Gonjandin, Dmitri; Viljus, Mart** Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 19 I. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

**Experimental mechanics analysis of recycled polypropylene-cotton composites for commercial applications**

**Hussain, Abrar; Goljandin, Dmitri; Podgurski, Vitali; Abbas, Muhammad Mujtaba; Krasnou, Illia** Advanced industrial and engineering polymer research 2023 / p. 226-238 : ill <https://doi.org/10.1016/j.aiepr.2022.11.001> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Growth dynamics of nanocrystalline diamond films produced by microwave plasma enhanced chemical vapor deposition in methane/hydrogen/air mixture : scaling analysis of surface morphology**

**Podgurski, Vitali; Bogatov, Andrei; Sedov, V.; Sildos, Ilmo; Mere, Arvo; Viljus, Mart; Buijnsters, J. G.; Ralchenko, V.** Diamond and related materials 2015 / p. 172-179 : ill <https://doi.org/10.1016/j.diamond.2015.07.002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Growth of Co nanoparticles on a nanostructured [thetha]-Al<sub>2</sub>O<sub>3</sub> film on CoAl(100)**

Rose, V.; **Podgurski, Vitali**; David, Rudolf; Franchy, R. Surface science 2007 / 3, p. 786-791 : ill

### **Growth of ultra-thin amorphous Al<sub>2</sub>O<sub>3</sub> films on CoAl(1 0 0)**

Rose, V.; **Podgurski, Vitali**; Costina, Ioan; Franchy, R. Surface science 2003 / p. 128-136

<https://www.sciencedirect.com/science/article/pii/S0039602803008914>

### **Growth, thermal stability, and magnetic properties of Co films on Ni<sub>3</sub>Al(001)**

Van Eek, Stella M.; Costina, Ioan; **Podgurski, Vitali**; David, Rudolf; Franchy, Rene Journal of applied physics 2006 / p. 114310-1 - 114310-10 <https://pubs.aip.org/aip/jap/article/99/11/114310/144105/Growth-thermal-stability-and-magnetic-properties>

### **Hard coatings manufacturing technology used in tooling**

**Gregor, Andre; Podgurski, Vitali**; Adoberg, Eron; **Kulu, Priit** Proceedings of the 5th International Conference of DAAAM Baltic : Industrial Engineering - Adding Innovation Capacity of Labour Force and Entrepreneur : 20-22 April 2006, Tallinn, Estonia 2006 / p. 255-260 : ill

### **High temperature oxidation of CoAl(100)**

Volker, R.; **Podgurski, Vitali**; Costina, Ioan; Franchy, R.; Ibach, H. J.Appl. surface science 2005 / p. 139-150

### **High temperature tribological performance of adaptive hard nanocomposite coatings deposited on a WC-Co substrate**

**Alamgir, Asad; Bogatov, Andrei; Yashin, Maxim; Viljus, Mart; Sondor, J.; Podgurski, Vitali** GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 12 <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

### **High temperature tribological properties of Al<sub>2</sub>O<sub>3</sub>/NCD films investigated under ambient air conditions**

**Podgurski, Vitali; Yashin, Maxim; Jõgiaas, Taivo; Viljus, Mart; Alamgir, Asad; Danilson, Mati; Bogatov, Andrei** Coatings 2020 / art. 175, 13 p. : ill <https://doi.org/10.3390/coatings10020175> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **High-temperature oxidation resistance and tribological properties of Al<sub>2</sub>O<sub>3</sub>/ta-C coating**

**Alamgir, Asad; Bogatov, Andrei; Jõgiaas, Taivo; Viljus, Mart; Raadik, Taavi; Kübarsepp, Jakob; Sergejev, Fjodor; Lümkmann, Andreas; Kluson, Jan; Podgurski, Vitali** Coatings 2022 / art. 547 <https://doi.org/10.3390/coatings12040547> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **High-temperature tribological performance of Al<sub>2</sub>O<sub>3</sub>/a-C:H:Si coating in ambient air**

**Podgurski, Vitali; Alamgir, Asad; Yashin, Maxim; Jõgiaas, Taivo; Viljus, Mart; Raadik, Taavi; Danilson, Mati; Sergejev, Fjodor; Lümkmann, Andreas; Kluson, Jan; Sondor, Jozef; Bogatov, Andrei** Coatings 2021 / art. 495, 15 p. : ill <https://doi.org/10.3390/coatings11050495> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **High-temperature tribological performance of hard multilayer TiN-AlTiN/nACo-CrN/AlCrN-AlCrO-AlTiCrN coating deposited on WC-Co substrate**

**Alamgir, Asad; Yashin, Maxim; Bogatov, Andrei; Viljus, Mart; Traksmaa, Rainer; Sondor, Jozef; Lümkmann, Andreas; Sergejev, Fjodor; Podgurski, Vitali** Coatings 2020 / art. 909, 10 p. : ill <https://doi.org/10.3390/coatings10090909> [Journal metrics at WOS](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Industrial approach to circularity of polymer composites : processing, characterization, mechanical testing, and wear regression**

**Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Antonov, Maksim** Journal of reinforced plastics and composites 2024 / p. 456-472 : ill <https://doi.org/10.1177/07316844231164563> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Industrial sustainable fabrication, SEM characterization, mechanical testing, ANOVA analysis of PP-PETF recycled composites : artificial intelligence and deep learning studies for nuclear shielding applications**

**Hussain, Abrar; Goljandin, Dmitri; Podgurski, Vitali; Yörük, Can Rüstü; Sergejev, Fjodor; Kübarsepp, Jakob; Maurya, Himanshu Singh; Rahmani Ahranjani, Ramin** European polymer journal 2024 / art. 113082 <https://doi.org/10.1016/j.eurpolymj.2024.113082> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Influence of drag finishing to dry sliding wear behaviour of PVD nanocomposite nACo coating during running-in**

**Surženkov, Andrei; Podgurski, Vitali; Viljus, Mart; Adoberg, Eron; Nanits, Mats-Maidu; Kulu, Priit; Veinthal, Renno** Materials engineering & Baltrib 2010 : materials of the XIX-th International Baltic Conference : October 28-29, 2010, Riga, Latvia 2010 / p. 26

### **Influence of surface morphology on the tribological behavior of diamond-like carbon coating**

**Podgurski, Vitali; Bogatov, Andrei; Freund, Martin; Kulu, Priit** Engineering materials and tribology 2013 / p. 83-91 : ill

### **Influence of surface roughness on the tribological behaviour of the PVD coatings**

**Surženkov, Andrei; Adoberg, Eron; Viljus, Mart; Podgurski, Vitali; Veinthal, Renno; Kulu, Priit; Gregor, Andre** 18th International Baltic Conference : Engineering Materials & Tribology : BALTMATTRIB-2009 : October 22-23, 2009, Tallinn, Estonia :

**Investigation of morphology changes on nanocrystalline diamond film surfaces during reciprocating sliding against Si<sub>3</sub>N<sub>4</sub> balls**

**Bogatov, Andrei; Podgurski, Vitali; Raadik, Taavi;** Kamjula, A. R.; Hantschel, Thomas; Tsigkourakos, M.; **Kulu, Priit** Engineering materials & tribology XXII 2014 / p. 126-129 <https://doi.org/10.4028/www.scientific.net/KEM.604.126> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Investigation of surface morphology of Nd<sub>2</sub>Fe<sub>14</sub>B and Nd<sub>2</sub>Fe<sub>14</sub>B+DLC thin films**

**Podgurski, Vitali; Kruusing, Arvi** Proceedings of the Third National DAAAM Conference in Estonia : SCIENCE '98 1998 / p. 107-109: ill

**Investigation of (Ti, Al)N based coatings grown by physical vapor deposition**

**Podgurski, Vitali;** Torp, Bo; **Traksmäa, Rainer; Veinthal, Renno; Viljus, Mart;** Coddet, Olivier; Morstein, Marcus; **Gregor, Andre;** **Kulu, Priit** Materials science = Medžiagotyra 2005 / 4, p. 352-355 : ill [https://www.researchgate.net/publication/237812860\\_Investigation\\_of\\_Ti\\_AlN\\_Based\\_Coatings\\_Grown\\_by\\_Physical\\_Vapor\\_Deposition](https://www.researchgate.net/publication/237812860_Investigation_of_Ti_AlN_Based_Coatings_Grown_by_Physical_Vapor_Deposition)

**Laser ablation and thermal evaporation of thin films and structures**

**Podgurski, Vitali** 2001 [https://www.ester.ee/record=b1507144\\*est](https://www.ester.ee/record=b1507144*est)

**Laser ablation deposition**

**Podgurski, Vitali** Proceedings of the First National DAAAM Conference in Estonia : Science '95 1996 / p. 76-79: ill

**Laser ablation deposition of NbFeB and CuInSe**

**Podgurski, Vitali** Junior EUROMAT '96 : European Conference : August 26-30, Lausanne, Switzerland : [abstracts] 1996

**Laser ablation of Nd-Fe-B magnets**

**Kruusing, Arvi; Podgurski, Vitali; Mikli, Valdek** Proceedings of the Estonian Academy of Sciences. Engineering 1996 / 1, p. 137-142: ill

**Magnetic shape memory (MSM) effect in textured polycrystalline Ni<sub>2</sub>MnGa**

Ezer, Y.; Sozinov, A.; Kimmel, G.; Etelaniemi, V.; Glavatskaja, N.I.; Anci, A.D.; **Podgurski, Vitali;** Lindroos, V.K.; Ullakko, K. Smart materials technologies : 3-4 March, 1999, Newport Beach, California 1999 / p. 244-251 : ill <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/3675/0000/Magnetic-shape-memory-MSM-effect-in-textured-polycrystalline-Ni2MnGa/10.1117/12.352795.full>

**Mechanical and tribological properties of 100-nm thick alumina films prepared by atomic layer deposition on Si(100) substrates**

**Alamgir, Asad; Bogatov, Andrei; Yashin, Maxim; Podgurski, Vitali** Proceedings of the Estonian Academy of Sciences 2019 / p. 126-130 : ill <https://doi.org/10.3176/proc.2019.2.01> [http://www.kirj.ee/public/proceedings\\_pdf/2019/issue\\_2/proc-2019-2-126-130.pdf](http://www.kirj.ee/public/proceedings_pdf/2019/issue_2/proc-2019-2-126-130.pdf) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Mild steel tribology for circular economy of textile industries**

**Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Antonov, Maksim;** Basit, Muhammad Abdul; Ahmad, Tahir Tribology in Industry 2021 / p. 552-560 <https://doi.org/10.24874/ti.1050.02.21.04> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Morphological changes on diamond and DLC films during sliding wear = Morfoloogilised muutused teemant- ja teemandiladsetel pinnitel liugkulumisel**

**Bogatov, Andrei** 2015 [http://www.ester.ee/record=b4447899\\*est](http://www.ester.ee/record=b4447899*est)

**Multifunctional, multilayered and nanostructured hard coatings**

**Podgurski, Vitali** Nanopowders, Nanostructured Materials and Coatings : Network for Nanostructured Materials of ACC : March 17, 2005, Tallinn, Estonia : book of abstracts 2005 / p. 25-26

**Nanocrystalline diamond films deformation observed during sliding tests against Si<sub>3</sub>N<sub>4</sub> balls as a possible cause for ripple formation on wear scars surface**

**Bogatov, Andrei; Viljus, Mart; Raadik, Taavi;** Hantschel, Thomas; **Podgurski, Vitali** Medžiagotyra = Materials science 2015 / p. 349-352 : ill <https://doi.org/10.5755/j01.ms.21.3.7232> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Nanopowders and nanostructured coatings**

**Kulu, Priit; Zimakov, Sergei; Podgurski, Vitali; Peetsalu, Priidu; Tarbe, Riho** Nanopowders, Nanostructured Materials and Coatings : Network for Nanostructured Materials of ACC : March 17, 2005, Tallinn, Estonia : book of abstracts 2005 / p. 8

**Ni<sub>2</sub>MnGa thin films deposited by laser ablation**

**Podgurski, Vitali;** Galambos, Szabolcs Proceedings of the 2nd International Conference, 27-29th April 2000, Tallinn, Estonia / DAAAM International Vienna, DAAAM National Estonia 2000 / p. 229-232 : ill



### **Pre- and posttreatment effect to the surface properties of thin hard coatings**

**Adoberg, Eron; Surženkov, Andrei; Podgurski, Vitali; Peetsalu, Priidu; Kulu, Priit** Materials engineering & Baltrib 2010 : materials of the XIX-th International Baltic Conference : October 28-29, 2010, Riga, Latvia 2010 / p. 44

### **Relation between self-organization and wear mechanisms of diamond films**

**Podgurski, Vitali; Bogatov, Andrei; Yashin, Maxim** Entropy 2018 / art. 279, 16 p. : ill <https://doi.org/10.3390/e20040279> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Research of permanent magnet microfabrication technology and electromagnetic microdevices at Tallinn Technical University**

**Kruusing, Arvi; Podgurski, Vitali** Proceedings of the Third Micro Structure Workshop : March 24-25, 1998 1998 / p. 71-78

### **Rippling on wear scar surfaces of nanocrystalline diamond films after reciprocating sliding against ceramic balls**

**Podgurski, Vitali; Hantschel, Thomas; Bogatov, Andrei; Kimmari, Eduard; Antonov, Maksim; Viljus, Mart; Mikli, Valdek; Raadik, Taavi; Kulu, Priit** Tribology letters 2014 / p. 493-501 : ill <https://doi.org/10.1007/s11249-014-0379-z> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **The role of paradigms and technical strategies for implementation of the circular economy in the polymer and composite recycling industries**

**Hussain, Abrar; Podgurski, Vitali; Viljus, Mart; Awan, Muhammad Rizwan** Advanced Industrial and Engineering Polymer Research 2023 / p. 1-12 <https://doi.org/10.1016/j.aiepr.2022.10.001> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Roughness of TiN and nanocomposite nc-Ti1-xAlxN/[alpha]-Si3N4 surface evaluated by means of AFM**

**Podgurski, Vitali; Nisumaa, Reet; Gregor, Andre; Adoberg, Eron; Kulu, Priit** Latvijas kimijas žurnals = Latvian journal of chemistry 2008 / 1, p. 62-66 : ill

### **Study of phase transitions within alumina grown on top of CoAl(100) surface**

**Podgurski, Vitali; Rose, V.; Costina, Ioan; Francy, R.** Surface science 2007 / 16, p. 3315-3323 : ill <https://www.sciencedirect.com/science/article/pii/S0039602807006371>

### **Sustainable fabrication of polypropylene-postconsumer cotton composite materials : circularity, characterization, mechanical testing, and tribology**

**Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Antonov, Maksim; Viljus, Mart; Krasnou, Illia** Materials today sustainability 2023 / art. 100344, 16 p. : ill <https://doi.org/10.1016/j.mtsust.2023.100344> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **The coexistence of [gamma(gamma'')] and [teeta] alumina observed by STM and LEED on top of oxide layer grown on CoAl(1 0 0)**

**Podgurski, Vitali; Rose, V.; Costina, J.; Franchy, R.** Applied surface science 2006 / 24, p. 8394-8398 : ill

### **The effect of surface pre-treatment and coating post-treatment to the properties of TiN coatings**

**Adoberg, Eron; Podgurski, Vitali; Peetsalu, Priidu; Lind, Liina; Mikli, Valdek; Hvizdoš, Pavol; Kulu, Priit** Estonian journal of engineering 2012 / p. 185-192 : ill [https://kirj.ee/public/Engineering/2012/issue\\_3/Eng-2012-3-185-192.pdf](https://kirj.ee/public/Engineering/2012/issue_3/Eng-2012-3-185-192.pdf)

### **The influence of target surface alterations on pulsed laser deposited YBa2Cu3O7-x film properties**

**Podgurski, Vitali** Proceedings of the Estonian Academy of Sciences. Engineering 2000 / 1, p. 14-24 : ill [https://artiklid.elnet.ee/record=b1003509\\*est](https://artiklid.elnet.ee/record=b1003509*est)

### **The structure and magnetic properties of Co films on Ni3Al(0 0 1)**

**Van Eek, Stella M; Costina, Ioan; Podgurski, Vitali; Franchy, Rene** Journal of magnetism and magnetic materials 2004 / p. 1607-1608 : ill

### **Thermodynamic behaviour of proton exchange membrane fuel cell under different thermal treatment regimes**

**Kesküll, Konon; Podgurski, Vitali** Proceedings of the Estonian Academy of Sciences 2024 / p. 361-365 <https://doi.org/10.3176/proc.2024.4.05> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Thin films by laser ablation**

**Podgurski, Vitali; Kruusing, Arvi; Altosaar, Mare; Krunks, Malle; Mellikov, Enn** International Conference Advanced Optical Materials and Devices, Riga, 1996 1996 / p. 199

### **TiAlN coatings tribology for textile machinery parts**

**Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Antonov, Maksim** Proceedings of the Estonian Academy of Sciences 2021 / p. 163-171 : ill <https://doi.org/10.3176/proc.2021.2.04> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **TiCN coating tribology for the circular economy of textile industries**

**Hussain, Abrar; Podgurski, Vitali; Antonov, Maksim; Viljus, Mart; Goljandin, Dmitri** Journal of industrial textiles 2022 / p. 8947S-8959S <https://doi.org/10.1177%2F15280837211025726> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Transition from self-organized criticality into self-organization during sliding Si3N4 balls against nanocrystalline diamond films**

**Bogatov, Andrei; Podgurski, Vitali; Vagiström, Heinar; Yashin, Maxim; Shaikh, Asad Alamgir; Viljus, Mart; Menezes, Pradeep; Gershman, Iosif** Entropy 2019 / art. 1055 ; 12 p <https://doi.org/10.3390/e21111055> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Tribological and circular economy aspects of polypropylene/cotton fibre hybrid composite**

**Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Antonov, Maksim; Kumar, Rahul, 1993-; Kamboj, Nikhil Kumar; Rahmani Ahranjani, Ramin; Viljus, Mart; Ahmad, Tahir; Krumme, Andres; Krasnou, Illia** Proceedings of the Estonian Academy of Sciences 2022 / p. 186-193 : ill <https://doi.org/10.3176/proc.2022.2.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Tribological and mechanical properties investigations of post-consumer cotton textiles**

**Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Viljus, Mart; Antonov, Maksim; Bogatov, Andrei; Krasnou, Illia** Solid state phenomena ; 320 2021 / p. 97-102 <https://doi.org/10.4028/www.scientific.net/SSP.320.97> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

### **Tribological behavior of carbon nanofibers deposited on hard nanocomposite (nc-Ti1-xAlxN)/(a-Si3N4) coating**

**Kimmari, Eduard; Podgurski, Vitali; Simunin, M.; Adoberg, Eron; Surženkov, Andrei; Viljus, Mart; Hartelt, M.; Wäsche, R.; Sildos, Ilmo; Kulu, Priit** Surface & coatings technology 2013 / p. 21-25 : ill <https://doi.org/10.1016/j.surfcoat.2013.03.011> <https://www.sciencedirect.com/science/article/pii/S0257897213002636?via%3Dihub> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Tribological behavior of hybrid coatings at extreme conditions = Hübriidpinnete triboloogiline käitumine ekstreemsetes tingimustes**

**Shaikh, Asad Alamgir** 2021 [https://www.ester.ee/record=b5434621\\*est](https://www.ester.ee/record=b5434621*est) <https://digikogu.taltech.ee/et/Item/2b9c25e8-2f7f-46ea-859a-366bf4b7f252> <https://doi.org/10.23658/taltech.33/2021>

### **Tribological properties of nanocrystalline diamond coating at high temperature sliding conduction [Online resource]**

**Yashin, Maxim; Baroninš, Janis; Menezes, Pradeep; Viljus, Mart; Raadik, Taavi; Bogatov, Andrei; Antonov, Maksim; Podgurski, Vitali** Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p. : ill <http://fmdk.ut.ee/teesid-2018/>

### **Tribology of alumina materials for the circular economy of manufacturing textile industries**

**Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Antonov, Maksim; Viljus, Mart** Proceedings of the Estonian Academy of Sciences 2021 / lk. 215-220 : ill <https://doi.org/10.3176/proc.2021.3.01> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Tungsten carbide material tribology and circular economy relationship in polymer and composites industries**

**Hussain, Abrar; Podgurski, Vitali; Antonov, Maksim; Abbas, Muhammad Mujtaba; Rizwan, Muhammad** Proceedings of the Institution of Mechanical Engineers, Part L : Journal of Materials : Design and Applications 2022 / p. 2066-2073 <https://doi.org/10.1177%2F14644207221096929> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Ultra thin Al2O3 films grown on Ni3Al(1 0 0)**

**Podgurski, Vitali; Costina, Ioan; Franchy, R.** Applied surface science 2003 / p. 29-36 : ill <https://www.sciencedirect.com/science/article/pii/S0169433202008024>

### **WC tribology for circular economy of manufacturing textile industries**

**Hussain, Abrar; Podgurski, Vitali; Antonov, Maksim; Goljandin, Dmitri; Viljus, Mart** GSFMT Scientific Conference 2021 : Tartu, June 14-15, 2021 : abstracts 2021 / P 33 [https://fmdk.ut.ee/wp-content/uploads/2021/06/GSFMT\\_abstractbook\\_2021.pdf](https://fmdk.ut.ee/wp-content/uploads/2021/06/GSFMT_abstractbook_2021.pdf)

### **Wear of hard coatings evaluated by means of kaloMax**

**Podgurski, Vitali; Gregor, Andre; Adoberg, Eron; Kulu, Priit** 15th International Baltic Conference "Engineering Materials & Tribology. Baltattrib - 2006" : October 5-6, 2006, Tallinn, Estonia : abstracts 2006 / p. 64-65

### **Wear of hard coatings, evaluated by means of kaloMax**

**Podgurski, Vitali; Gregor, Andre; Adoberg, Eron; Kulu, Priit** Proceedings of the Estonian Academy of Sciences. Engineering 2006 / 4, p. 419-426 : ill

### **Wear rate of nanocrystalline diamond coating under high temperature sliding conditions**

**Yashin, Maxim; Baroninš, Janis; Menezes, Pradeep; Viljus, Mart; Raadik, Taavi; Bogatov, Andrei; Antonov, Maksim; Podgurski, Vitali** Materials Engineering 2017 : selected, peer reviewed papers from the 26th International Baltic Conference on Materials Engineering 2017, October 26-27, Kaunas, Lithuania 2017 / p. 219-223 : ill  
<https://doi.org/10.4028/www.scientific.net/SSP.267.219> [Conference proceedings at Scopus](#) [Article at Scopus](#)

**Лазерная абляция магнитных и полупроводниковых материалов : работа ... магистра технических наук Podgurski, Vitali** 1996 [https://www.ester.ee/record=b2681294\\*est](https://www.ester.ee/record=b2681294*est)