

#### **Abrasion of cermets**

**Pirso, Jüri; Viljus, Mart; Juhani, Kristjan; Letunovitš, Sergei** Advances in engineering research. Volume 3 2011 / p. 397-426

#### **Abrasive erosion of chromium carbide based cermets**

**Pirso, Jüri; Viljus, Mart; Kübarsepp, Jakob** 9th Nordic Symposium on Tribology NORDTRIB 2000 : Porvoo, Finland, 11-14 June 2000. Vol. 3 2000 / p. 959-967 : ill

#### **Abrasive impact wear of WC-Co and TiC-NiMo cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei; Tarraste, Marek** Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2 2012 / p. 621-626 : ill  
[https://www.researchgate.net/publication/286139638\\_Abrasive\\_impact\\_wear\\_of\\_WC-Co\\_and\\_TiC-NiMo\\_cermets](https://www.researchgate.net/publication/286139638_Abrasive_impact_wear_of_WC-Co_and_TiC-NiMo_cermets)

#### **Abrasive wear of chromium carbide based cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei** Proceedings of Nordtrib 2008 : 13th Nordic Symposium on Tribology : Tampere, Finland, 10-13 June, 2008 2008 / ? p

#### **Abrasive wear of chromium carbide based cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei** Tribologia : Finnish journal of tribology 2008 / 2/3, p. 23-32 : ill

#### **Abrasive wear of Cr<sub>3</sub>C<sub>2</sub> base cermets**

**Pirso, Jüri; Viljus, Mart; Kübarsepp, Jakob; Hussainova, Irina** Abstracts of papers from 2nd World Tribology Congress 2001 / p. 158

#### **Abrasive wear of Cr<sub>3</sub>C<sub>2</sub> base cermets [Electronic resource]**

**Pirso, Jüri; Viljus, Mart; Kübarsepp, Jakob; Hussainova, Irina** WTC 2001 : 2nd World Tribology Congress : Vienna, Austria, 03-07 September 2001 2001 / [4] p. : ill. [CD-ROM]

#### **Abrasive wear performance of carbide based composites**

**Kübarsepp, Jakob; Klaasen, Heinrich; Roosaar, Tõnu; Viljus, Mart; Traksmäa, Rainer** Proceedings of European Powder Metallurgy Congress : EURO PM2007 : Toulouse (France), 15-17 October 2007. Vol. 1 2007 / p. 221-226

#### **Abrasive-erosive wear of thermally sprayed coatings from experimental and commercial Cr<sub>3</sub>C<sub>2</sub>-based powders**

**Sarjas, Heikki; Surženkov, Andrei; Juhani, Kristjan; Antonov, Maksim; Adoberg, Eron; Kulu, Priit; Viljus, Mart; Traksmäa, Rainer; Matikainen, Ville; Vuoristo, Petri** Journal of thermal spray technology 2017 / p. 2020-2029 : ill <https://doi.org/10.1007/s11666-017-0638-2> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Adhesion wear performance of carbide-base composites**

**Roosaar, Tõnu; Kübarsepp, Jakob; Klaasen, Heinrich; Viljus, Mart** Proceedings of Nordtrib 2008 : 13th Nordic Symposium on Tribology : Tampere, Finland, 10-13 June, 2008 2008 / [10] p

#### **Adhesive wear performance of hardmetals and cermets**

**Klaasen, Heinrich; Kübarsepp, Jakob; Roosaar, Tõnu; Viljus, Mart; Traksmäa, Rainer** Wear 2010 / 9/10, p. 1122-1128 : ill

#### **Alloying of TiC-FeCr cermet in manganese vapor**

**Kolnes, Märt; Tarraste, Marek; Kübarsepp, Jakob; Juhani, Kristjan; Viljus, Mart** IOP conference series : materials science and engineering 2021 / art. 012043 <https://doi.org/10.1088/1757-899X/1140/1/012043>

#### **Analysis of microstructure and abrasive wear of Fe-based hardfacings with TiC, in-situ synthesized from TiO<sub>2</sub>**

**Yöyler, Sibel; Surzhenkov, Andrei; Antonov, Maksim; Viljus, Mart; Traksmäa, Rainer; Juhani, Kristjan** Euro PM2023 : proceedings 2023 / art. 195090 <https://doi.org/10.59499/EP235762969>

#### **Annealing of frozen-in defects in ZnO**

**Nirk, Tiit; Lott, Kalju; Seeman, Viktor; Törn, Leo; Viljus, Mart; Öpik, Andres** Physica status solidi (c) 2016 / p. 590-593 : ill  
<https://doi.org/10.1002/pssc.201510244> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

#### **Application issues of additive manufacturing in plaster mold casting of metals**

**Pohlak, Meelis; Sergejev, Fjodor; Tähemaa, Toivo; Saarna, Mart; Viljus, Mart; Hermaste, Aigar** Proceedings of the Estonian Academy of Sciences 2025 / p. 181-185 <https://doi.org/10.3176/proc.2025.2.18>

#### **Application of Taguchi method for in-situ synthesis of TiC from TiO<sub>2</sub>-graphite powders in PTAW hardfacings and characterization thereof**

**Yöyler, Sibel; Surzhenkov, Andrei; Viljus, Mart; Traksmäa, Rainer; Juhani, Kristjan** Modern materials and manufacturing 2023 : Tallinn, Estonia, 2-4 May 2023 2024 / art. 040007 <https://doi.org/10.1063/5.0189317> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Behaviour of carbide composites in different operation conditions**

**Kübarsepp, Jakob; Klaasen, Heinrich; Viljus, Mart; Traksmäa, Rainer; Sergejev, Fjodor** Powder metallurgy progress 2011 / p. 258-264 : ill

### **Carbide grain and structure formation in Cr<sub>3</sub>C<sub>2</sub>-base cermets during sintering**

**Viljus, Mart; Traksmäa, Rainer; Pirso, Jüri** Proceedings of Joint Nordic Conference in Powder Technology 2000 / p. 24

### **Carbide grain growth in Cr<sub>3</sub>C<sub>2</sub>-based cermets during sintering**

**Viljus, Mart; Pirso, Jüri; Traksmäa, Rainer** Proceedings of the 2nd International Conference, 27-29th April 2000, Tallinn, Estonia / DAAAM International Vienna, DAAAM National Estonia 2000 / p. 159-162 : ill

### **Characterisation of corrosion resistance of stainless TiC-base cermets**

**Baranovskaja, Irina; Kübarsepp, Jakob; Idla, Katrin; Viljus, Mart** Proceedings of the 2nd International Conference, 27-29th April 2000, Tallinn, Estonia / DAAAM International Vienna, DAAAM National Estonia 2000 / p. 163-166

[https://www.researchgate.net/publication/260133663\\_Characterisation\\_of\\_corrosion\\_resistance\\_of\\_stainless\\_TiC-base\\_cermets](https://www.researchgate.net/publication/260133663_Characterisation_of_corrosion_resistance_of_stainless_TiC-base_cermets)

### **Characterisation of TiC powders milled by attritor technique**

**Letunovič, Sergei; Kommel, Lembit; Viljus, Mart; Pirso, Jüri** Proceedings of the 2nd International Conference, 27-29th April 2000, Tallinn, Estonia / DAAAM International Vienna, DAAAM National Estonia 2000 / p. 153-156 : ill

### **Characterization of TiC-FeCrMn cermets produced by powder metallurgy method**

**Kolnes, Märt; Kübarsepp, Jakob; Kollo, Lauri; Viljus, Mart** Medžiagotyra = Materials science 2015 / p. 353-357 : ill

<https://doi.org/10.5755/j01.ms.21.3.7364> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Coin Hoard from Varudi – Vanaküla. Questions and Answers in Conservation**

**Viljus, Aive; Viljus, Mart** International journal of conservation science 2017 / p. 599–606 : ill [http://www.ijcs.uaic.ro/public/IJCS-17-57\\_Viljus.pdf](http://www.ijcs.uaic.ro/public/IJCS-17-57_Viljus.pdf) [Journal metrics at Scopus](#) [Article at Scopus](#)

### **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 study of plasma cladded Fe-based composite hardfacings with in situ synthesized Cr and Ti carbide reinforcement**

**Tkachivskiy, Dmytro; Viljus, Mart; Traksmäa, Rainer; Antonov, Maksim; Surženkov, Andrei; Juhani, Kristjan; Kulu, Priit** Solid state phenomena ; 320 2021 / p. 83-89 <https://doi.org/10.4028/www.scientific.net/SSP.320.83> [Conference proceedings metrics at Scopus](#) [Article at Scopus](#)

### **A comparative study of the growth dynamics and tribological properties of nanocrystalline diamondfilms 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](#)

### **Comparative study of the PVD coatings on the plasma nitrided steel**

**Surženkov, Andrei; Põdra, Priit; Sergejev, Fjodor; Saarna, Mart; Adoberg, Eron; Mikli, Valdek; Viljus, Mart; Kulu, Priit** Materials science = Medžiagotyra 2012 / p. 40-44 : ill <https://matcs.ktu.lt/index.php/MatSc/article/view/1339>

### **Comparison of plasma transferred arc and submerged arc welded abrasive wear resistant composite hardfacings**

**Simson, Taavi; Kulu, Priit; Surženkov, Andrei; Ciuplys, Antanas; Viljus, Mart; Zaldarys, Gintautas** Materials science = Medžiagotyra 2018 / p. 172-176 : ill <https://doi.org/10.5755/j01.ms.24.2.19121> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Comparison of plasma transferred arc and submerged arc welded abrasive wear resistant composite hardfacings [Online resource]**

**Simson, Taavi; Kulu, Priit; Surženkov, Andrei; Bendikiene, Regita; Ciuplys, Antanas; Viljus, Mart** 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 <http://fntdk.ut.ee/teesid-2018/>

### **Corrigendum to “The influence of high energy milling and sintering parameters on reactive sintered (Ti, Mo)C–Ni cermets” [J. Alloys Compd. 636 (2015) 381–386] (S0925838815005009) (10.1016/j.jallcom.2015.02.071))**

**Jõelet, Marek; Pirso, Jüri; Juhani, Kristjan; Viljus, Mart; Traksmäa, Rainer** Journal of alloys and compounds 2018 / p. 128 <https://doi.org/10.1016/j.jallcom.2018.05.128> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Corrosion behavior of high velocity oxy-fuel sprayed composite Ni-Fe-based self-fluxing alloy - cermet coatings**

**Sarjas, Heikki; Surženkov, Andrei; Baroninš, Janis; Viljus, Mart; Traksmäa, Rainer; Kulu, Priit** Journal of mineral, metal and

material engineering 2018 / p. 1-9 : ill <http://www.scientificarray.org/journal-of-mineral-metal-and-material-engineering-volume-4/>

#### **Corrosion of titanium carbide cermets in mineral acids**

**Viljus, Mart; Pirso, Jüri; Kallavus, Urve** Materials Engineering - 98 : materials of the VII-th International Baltic Conference, September 24-25, Jurmala, Latvia 1998 / p. 141-145: 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>

#### **Design of superhard c-BC<sub>2</sub>N-precipitates in B<sub>4</sub>C/Al-composites through SHS and heat treatment**

**Kommel, Lembit; Metsvahi, Rainer; Viljus, Mart; Kimmari, Eduard; Kolju, Karl; Traksmaa, Rainer** Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2 2012 / p. 645-650 : ill

#### **Developments in cermet design, technology and performance**

**Kübarsepp, Jakob; Pirso, Jüri; Juhani, Kristjan; Viljus, Mart** International journal of materials & product technology 2014 / p. 160-179 <https://doi.org/10.1504/IJMP.2014.064046> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Dry sliding wear of cermets**

**Viljus, Mart; Pirso, Jüri** International journal of materials & product technology 2007 / 3/4, p. 468-486 : ill

#### **Dry sliding wear of cermets under high-speed conditions**

**Pirso, Jüri; Ajaots, Maido; Viljus, Mart; Vallikivi, Ahto** Engineering Materials & Tribology : BALTMATTRIB - 2003 : 12th International Baltic Conference : October 2-3, 2003, Tallinn, Estonia : abstracts 2003 / p. 76

#### **Dual compounds "cemented carbide+steel" produced by diffusion bonding**

**Klaasen, Heinrich; Kübarsepp, Jakob; Laansoo, Andres; Viljus, Mart** European Powder Metallurgy Conference on Meeting the Challenges of a Changing Market Place : EURO PM2003 : Valencia, Spain, October 20-22, 2003 : conference proceedings. Volume 1 2003 / p. 155-159 : ill

#### **Effect of carbide phase and binder chemical composition on surface fatigue of carbide composites [Electronic resource]**

**Petrov, Mihail; Kübarsepp, Jakob; Sergejev, Fjodor; Viljus, Mart** Euro PM2015 Congress & Exhibition : proceedings : 4-7 October 2015, Reims Congress Centre, Reims, France 2015 / [6] p. : ill. [USB]

#### **Effect of carbide produces technique on the structure and properties of the Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Letunovitš, Sergei; Viljus, Mart; Pirso, Jüri** Proceedings of the 3rd International Conference Industrial Engineering - New Challenges to SME : 25-27 April 2002, Tallinn, Estonia 2002 / p. 181-184 : ill

#### **Effect of carbon content on sinterability and properties of ZrO<sub>2</sub> doped WC-cermets**

**Cura, M. Erkin; Voltšihhin, Nikolai; Hussainova, Irina; Viljus, Mart; Hannula, Simo-Pekka** Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2 2012 / p. 771-776

#### **Effect of carbon stabilizing elements on WC cemented carbides with chromium steel binder**

**Tarraste, Marek; Kübarsepp, Jakob; Juhani, Kristjan; Mere, Arvo; Viljus, Mart** Materials science = Medžiagotyra 2019 / p. 202-206 : ill <https://doi.org/10.5755/j01.ms.25.2.19619> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Effect of free carbon on the mechanical and tribological properties of cemented carbides**

**Joost, Renee; Pirso, Jüri; Tenno, Taavi; Viljus, Mart** Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [Il] 2010 / p. 450-455 : ill

#### **Effect of laser heat treatment on Al<sub>x</sub>Ti<sub>1-x</sub>N-based PVD coatings, deposited on carbon and tool steel substrates**

**Surženkov, Andrei; Viljus, Mart; Antonov, Maksim; Kübarsepp, Jakob; Juhani, Kristjan; Kulu, Priit; Vagiström, Heinar; Jankauskas, Vytenis; Leišys, Rimtautas; Bendikiene, Regita; Adoberg, Eron; Peetsalu, Priidu; Mere, Arvo; Gregor, Andre** Surface and coatings technology 2022 / art. 128771 <https://doi.org/10.1016/j.surfcoat.2022.128771> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **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>

#### **The effect of niobium on in situ synthesis of titanium carbide in composite hardfacings**

**Yöyler, Sibel; Surzhenkov, Andrei; Viljus, Mart; Traksmaa, Rainer; Juhani, Kristjan** Materials Engineering and Modern Manufacturing, MeMM 2023 : Selected peer-reviewed extended articles based on abstracts presented at the 30th International Baltic Conference "Materials Engineering and Modern Manufacturing 2023", MeMM 2023 Materials science forum 2023 / p. 55-60 <https://doi.org/10.4028/p-A5WzJl>

**The effect of niobium on the microstructure evolution of ferritic stainless steel matrix cermets**

Kolnes, Märt; Juhani, Kristjan; Kübarsepp, Jakob; Viljus, Mart Modern materials and manufacturing 2023 2024 / art. 040011  
<https://doi.org/10.1063/5.0190158> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

**Effect of oxidation on abrasive wear behaviour of titanium carbide based composites in silica medium**

Antonov, Maksim; Hussainova, Irina; Pirso, Jüri; Juhani, Kristjan; Viljus, Mart Estonian journal of engineering 2010 / 4, p. 264-272 : ill

**Effect of sintering conditions on microstructure and performance of TiC-FeCrMn cermets [Electronic resource]**

Kolnes, Märt; Kübarsepp, Jakob; Viljus, Mart; Traksmäa, Rainer; Illopmägi, Siim World PM2016 proceedings 2016 / [7] p. : ill. [USB]

**Effect of sintering method on surface fatigue of carbide composites**

Petrov, Mihail; Kübarsepp, Jakob; Sergejev, Fjodor; Viljus, Mart; Tarraste, Marek Engineering materials and tribology XXV 2017 / p. 368-372 : ill <https://doi.org/10.4028/www.scientific.net/KEM.721.368> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Effect of thermal shock treatment parameters on the efficiency of WC-Co cermet recycling**

Kariminejad, Arash; Antonov, Maksim; Kumar, Rahul, 1993-; Goljandin, Dmitri; Klimczyk, Piotr; Viljus, Mart AIP conference proceedings 2024 / art. 040013 <https://doi.org/10.1063/5.0189330> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

**Ein bronzener Brillenspiralanhänger von der Insel Aegna (Estland) : Überlegungen zur Herkunft, Herstellung und zur Insel als Deponierungsort**

Sperling, Uwe; Tamla, Ülle; Trommer, Frank; Vassiljev, Jüri; Viljus, Mart Archäologisches Korrespondenzblatt 2021 / S. 205-207  
<https://doi.org/10.11588/ak.2021.2.89275> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Endolymphatic structures in headshields of the osteostracan genus Tremataspis (Agnatha) from the Silurian of Estonia**

Märss, Tiit; Wilson, Mark V.H.; Viljus, Mart Estonian journal of earth sciences 2022 / p. 135-156 : ill  
<https://doi.org/10.3176/earth.2022.10> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Erosion wear of reactive sintered WC-TiC-Co cermets**

Tarraste, Marek; Juhani, Kristjan; Pirso, Jüri; Viljus, Mart Engineering materials & tribology XXII 2014 / p. 63-66  
<https://doi.org/10.4028/www.scientific.net/KEM.604.63> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Conference proceedings at WOS](#) [Article at WOS](#)

**Erosion-corrosion wear of WC-Co hardmetals in solid-liquid mixture**

Viljus, Mart; Pirso, Jüri Materials Engineering & Balttrib 2001 : materials of the X-th International Baltic Conference : September 27-28, Jurmala, Latvia 2001 / p. 193-197 : ill

**Erosive and impact-abrasive wear of hardmetals with Fe-based binders**

Tarraste, Marek; Antonov, Maksim; Kolnes, Märt; Viljus, Mart; Ormus, Andres-Hardi Journal of the Japan Society of Powder and Powder Metallurgy 2025 / p. S1437-S1444 <https://doi.org/10.2497/jjspm.16F-T15-05>

**Erosive wear of TiC-base cermets**

Kübarsepp, Jakob; Klaasen, Heinrich; Mikli, Valdek; Viljus, Mart Abstracts of International Conference Materials Engineering and Tribology 2002 / p. 41

**Erosive wear of TiC-base cermets**

Kübarsepp, Jakob; Klaasen, Heinrich; Mikli, Valdek; Viljus, Mart Medžiagotyra = Materials science 2002 / 4, p. 486-488 : ill

**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](#)

**Ferritic chromium steel as binder metal for WC cemented carbides**

Tarraste, Marek; Kübarsepp, Jakob; Juhani, Kristjan; Mere, Arvo; Kolnes, Märt; Viljus, Mart; Maaten, Birgit International journal of refractory metals and hard materials 2018 / p. 183-191 : ill <https://doi.org/10.1016/j.jrmhm.2018.02.010> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Formation of property gradient in coarse-grained niobium using a wedge tool : experiment and analysis**

Tarasov, Oleksandr; Kübarsepp, Jakob; Viljus, Mart; Saarna, Mart; Sergejev, Fjodor International journal of refractory metals and hard materials 2024 / art. 106905 <https://doi.org/10.1016/j.jrmhm.2024.106905> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Formation of structure of the CdTe film, recrystallized on Mo/glass substrate under high temperature and mechanical pressure**



**Mikli, Valdek; Hiie, Jaan; Valdna, Vello; Viljus, Mart; Traksmäa, Rainer; Kallavus, Urve** Thin solid films 2009 / 7, p. 2252-2255 : ill

#### **Friction and dry sliding wear behaviour of cermets**

**Pirso, Jüri; Viljus, Mart; Letunovič, Sergei** Wear 2006 / 7/8, p. 815-824 : ill

#### **Friction and wear behaviour of cemented carbides**

**Pirso, Jüri; Letunovič, Sergei; Viljus, Mart** Wear 2004 / p. 257-265 : ill

#### **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](#)

#### **Hardfacings for extreme wear applications**

**Kulu, Priit; Surženkov, Andrei; Tarbe, Riho; Saarna, Mart; Tarraste, Marek; Viljus, Mart** Surface Modification Technologies XXVIII : proceedings of the Twenty Eighth International Conference on Surface Modification Technologies : Tampere University of Technology, Tampere, Finland, June 16-18, 2014 2015 / p. 149-157 : ill

#### **Heat conductive plates from recycled niobium slag**

**Kulu, Priit; Goljandin, Dmitri; Viljus, Mart; Traksmäa, Rainer; Gregor, Andre** Solid State Phenomena ; 320 2021 / p. 169-175 <https://doi.org/10.4028/www.scientific.net/SSP.320.169> [Conference proceedings at Scopus](#) [Article at Scopus](#)

#### **High energy milling of WC-FeCr cemented carbide**

**Tarraste, Marek; Kübarsepp, Jakob; Juhani, Kristjan; Kolnes, Märt; Viljus, Mart** Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia 2019 / p. 136-141 : ill <https://www.scientific.net/KEM.799.136> [https://www.ester.ee/record=b5235278\\*est](https://www.ester.ee/record=b5235278*est) <https://doi.org/10.4028/www.scientific.net/KEM.799.136> [Conference proceeding at Scopus](#) [Article at Scopus](#)

#### **High temperature electrical conductivity in ZnSe:In and in CdSe:In under selenium vapor pressure**

**Lott, Kalju; Šinkarenko, Svetlana; Volobujeva, Olga; Tünn, Leo; Nirk, Tiit; Öpik, Andres; Nisumaa, Reet; Kallavus, Urve; Nõges, M.; Mikli, Valdek; Viljus, Mart; Gorokhova, Elena; Ananjeva, G.; Grebennik, A.; Vishnjakov, A.** Physica status solidi (b) 2007 / 5, p. 1623-1626 [https://www.researchgate.net/publication/238892320\\_High\\_temperature\\_electrical\\_conductivity\\_in\\_ZnSeIn\\_and\\_in\\_CdSeIn\\_under\\_selenium\\_vapor\\_pressure](https://www.researchgate.net/publication/238892320_High_temperature_electrical_conductivity_in_ZnSeIn_and_in_CdSeIn_under_selenium_vapor_pressure)

#### **High temperature electrical conductivity in undoped ceramic ZnO**

**Lott, Kalju; Nirk, Tiit; Gorokhova, Elena; Tünn, Leo; Viljus, Mart; Öpik, Andres; Vishnjakov, A.** Crystal research and technology 2015 / p. 10-14 : ill <https://doi.org/10.1002/crat.201400138> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Conference proceedings at WOS](#) [Article at WOS](#)

#### **High temperature erosion wear of cermet particles reinforced self-fluxing alloy HVOF sprayed coatings**

**Surženkov, Andrei; Goljandin, Dmitri; Traksmäa, Rainer; Viljus, Mart; Talviste, Kristofer; Aruniit, Aare; Latokartano, Jyrki; Kulu, Priit** Medžiagotyra = Materials science 2015 / p. 386-390 : ill <https://doi.org/10.5755/j01.ms.21.3.7617> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **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 erosion of Fe-based coatings reinforced with cermet particles**

**Surženkov, Andrei; Antonov, Maksim; Goljandin, Dmitri; Kulu, Priit; Viljus, Mart; Traksmäa, Rainer; Mere, Arvo** Surface engineering 2016 / p. 624-630 : ill <https://doi.org/10.1080/02670844.2016.1145377> [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; Lümekmann, 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; Lümekemann, 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; Lümekemann, 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](#)

#### **Impact and sliding wear properties of single layer, multilayer and nanocomposite physical vapour deposited (PVD) coatings on the plasma nitrided low-alloy 42CrMo4 steel**

**Surženkov, Andrei; Adoberg, Eron; Põdra, Priit; Sergejev, Fjodor; Mere, Arvo; Viljus, Mart; Mikli, Valdek; Antonov, Maksim; Kulu, Priit** Engineering materials and tribology 2013 / p. 223-228 : ill

#### **Impact of Nb content on the morphology and properties of Ti (C<sub>0.5</sub>N<sub>0.5</sub>)-FeCrMo-based green cermets**

**Maurya, Himanshu Singh; Tarraste, Marek; Viljus, Mart; Juhani, Kristjan; Sergejev, Fjodor; Kübarsepp, Jakob** Ceramics international 2024 / 10 p <https://doi.org/10.1016/j.ceramint.2024.11.188>

#### **Impact wear of chromium carbide based cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovits, Sergei** 17th International Baltic Conference : Materials Engineering 2008 : November 6-7, Kaunas, Lithuania : abstracts of papers 2008 / p. 27-28

#### **Impact wear of chromium carbide based cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovits, Sergei** Materials science 2008 / p. 341-344 : ill

#### **Induction brazing of cermets to steel**

**Laansoo, Andres; Kübarsepp, Jakob; Vainola, Vello; Viljus, Mart** Estonian journal of engineering 2012 / p. 232-242 : ill

#### **Induction brazing of cermets to steel and eddy current testing of joint quality**

**Laansoo, Andres; Kübarsepp, Jakob; Surženkov, Andrei; Land, Raul; Märtens, Olev; Viljus, Mart** Welding in the World 2020 / p. 563-571 <https://doi.org/10.1007/s40194-020-00854-x> [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 laser hardening to the sliding wear resistance of the PVD (Al,Ti)N-G and nACo® coatings**

**Surženkov, Andrei; Adoberg, Eron; Antonov, Maksim; Sergejev, Fjodor; Mikli, Valdek; Viljus, Mart; Latokartano, Jyrki; Kulu, Priit** Engineering materials & tribology XXII 2014 / p. 28-31 <https://doi.org/10.4028/www.scientific.net/KEM.604.28> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Conference proceedings at WOS](#) [Article at WOS](#)

#### **Influence of precursor zirconium carbide powders on the properties of the spark plasma sintered ceramic composite materials**

**Voltsihhin, Nikolai; Hussainova, Irina; Hannula, Simo-Pekka; Viljus, Mart** Developments in Strategic Materials and Computational Design IV 2014 / p. 297-308 : ill <https://doi.org/10.1002/9781118807743> [Conference proceedings at Scopus](#) [Article at Scopus](#)

#### **Influence of pressurized sintering on the performance of TiC-based cermets**

**Kübarsepp, Jakob; Klaasen, Heinrich; Tsinjan, Aleksei; Juhani, Kristjan; Kollo, Lauri; Viljus, Mart** Engineering materials and tribology 2013 / p. 56-61 [https://www.researchgate.net/publication/272047524\\_Influence\\_of\\_Pressurized\\_Sintering\\_on\\_Performance\\_of\\_TiC-Based\\_Cermets](https://www.researchgate.net/publication/272047524_Influence_of_Pressurized_Sintering_on_Performance_of_TiC-Based_Cermets)

#### **Influence of strong carbide-forming elements (Nb and Ta) on the development of the green (Ti, Me)(C,N)-high chromium Fe-based cermets**

**Maurya, Himanshu Singh; Juhani, Kristjan; Tarraste, Marek; Viljus, Mart; Kumar, Rahul, 1993-; Hussain, Abrar; Sergejev, Fjodor; Kübarsepp, Jakob** Vacuum 2024 / art. 113723, 12 p <https://doi.org/10.1016/j.vacuum.2024.113723> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **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 : BALTMATRIB-2009 : October 22-23, 2009, Tallinn, Estonia : abstracts 2009 / p. 38

#### **In-situ alloying of TiC-FeCr cermets in manganese vapour**

**Kolnes, Märt; Tarraste, Marek; Kübarsepp, Jakob; Juhani, Kristjan; Viljus, Mart** Proceedings of the Estonian Academy of Sciences 2021 / p. 533-539 : ill <https://doi.org/10.3176/proc.2021.4.22> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Investigation of subcontact layers in SiC after diffusion welding**

**Korolkov, Oleg; Kuznetsova, Natalja; Sitnikova, A.; Viljus, Mart; Rang, Toomas** Silicon carbide and related materials 2007 2009 / p. 647-650

**Investigation of subcontact layers in SiC after diffusion welding**

**Korolkov, Oleg; Kuznetsova, Natalja; Sitnikova, A.; Viljus, Mart; Rang, Toomas** Silicon carbide and related materials 2007 / p. 100 <https://www.scientific.net/MSF.600-603.647>

**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)

**Kõige toredam on ideede genereerimine : [kineetilise kunstist : vestlus M.Viljusega]**

**Viljus, Mart; Ruul, Kristi** Eesti Sõnumid 1994 / 23. nov., lk. 10

**Loom**

**Viljus, Mart** Biotoopia : Bioloogia. Tehnoloogia. Utopia. : Sorose Kaasaegse Kunsti Eesti Keskuse 3. aastanäitus, 22. november - 17. detsember 1995 1996 / 2 lk.: ill

**Low temperature synthesized WC and its usability for fine-grained hardmetal**

**Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei** Proceedings of EURO PM2006 Congress & Exhibition : Ghent, Belgium, October 23-25. 1, Hard materials 2006 / p. 281-286

**Mart Viljus : [CV ja fotod]**

**Viljus, Mart; Linnap, Peeter** Eesti foto antoloogia. II köide, 1940 kuni 2010 = Anthology of Estonian photography. Volume II, from 1940 to 2010 2021 / lk. 1006-1013 : portr., fot [https://www.ester.ee/record=b5386803\\*est](https://www.ester.ee/record=b5386803*est)

**Mechanical properties and microstructure of reactive sintered WC-TiC-Co cemented carbides**

**Tarraste, Marek; Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei** Proceedings of the 2012 Powder Metallurgy World Congress & Exhibition 2012 [https://www.researchgate.net/publication/239937576\\_Mechanical\\_Properties\\_and\\_Microstructure\\_of\\_Reactive\\_Sintered\\_WC-TiC-Co\\_Cemented\\_Carbides](https://www.researchgate.net/publication/239937576_Mechanical_Properties_and_Microstructure_of_Reactive_Sintered_WC-TiC-Co_Cemented_Carbides)

**Mechanically activated synthesis of chromium carbide**

**Viljus, Mart; Letunovitš, Sergei; Traksmäa, Rainer; Pirso, Jüri** Proceedings of the 3rd International Conference Industrial Engineering - New Challenges to SME : 25-27 April 2002, Tallinn, Estonia 2002 / p. 220-223 : ill

**Mechanically activated synthesis of nanocrystalline chromium carbide powders**

**Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei** Nanopowders, Nanostuctured Materials and Coatings : Network for Nanostructured Materials of ACC : March 17, 2005, Tallinn, Estonia : book of abstracts 2005 / p. 34-36 : ill

**Metallographic investigation of iron blooms and bars from the smithy site of Käku, Estonia**

Saage, Ragnar; Peets, Jüri; **Kulu, Priit; Peetsalu, Priidu; Viljus, Mart** Fennoscandia archaeologica 2017 / p. 46-58 : ill <https://www.tiedekirja.fi/default/fennoscandia-archaeologica-xxiv.html> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Microstructural and mechanical characteristics of in situ synthesized chromium-nickel-graphite composites**

**Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei; Juhani, Kristjan** Extended abstracts of 2006 Powder Metallurgy World Congress : Busan, Korea, September 24-28. 1 2006 / p. 631-632

**Microstructural and mechanical characteristics of in situ synthesized chromium-nickel-graphite composites**

**Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei; Juhani, Kristjan** Materials science forum 2007 / Progress in powder metallurgy, p. 1209-1212 : ill <https://www.scientific.net/MSF.534-536.1209>

**Microstructural characteristics and properties of reactive sintered TiC-based cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei** 17th Plansee Seminar : International Conference on High Performance P/M Materials : Reutte, Austria, 25-29.05.2009 : proceedings. Vol. 2 2009 / p. HM56/1-HM65/6

**Microstructural effects on wear of nonhomogeneous hardmetal materials**

**Hussainova, Irina; Viljus, Mart** Proceedings of the Estonian Academy of Sciences. Engineering 2003 / 2, p. 126-136 : ill [https://artiklid.elnet.ee/record=b1012788\\*est](https://artiklid.elnet.ee/record=b1012788*est)

### **Microstructural evolution and mechanical properties of Ti(C,N)–FeCrMo-based green cermets**

**Maurya, Himanshu Singh; Juhani, Kristjan; Viljus, Mart; Sergejev, Fjodor; Kübarsepp, Jakob** Ceramics international 2024 / p. 8695-8705 <https://doi.org/10.1016/j.ceramint.2023.12.186> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Microstructure and properties of reactive sintered TiC-based cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunoviš, Sergei** International Powder Metallurgy Congress & Exhibition : EURO PM2008 : 29th September - 1st October 2008, Mannheim, Germany : proceedings. Vol.3 2008 / p. 89-94 : ill

### **Microstructure and wear resistance of the laser hardened PM tool steel Vanadis 6**

**Surženkov, Andrei; Kulu, Priit; Viljus, Mart; Vallikivi, Ahto;** Latokartano, Jyrki Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [II] 2010 / p. 486-491 : ill

### **Microstructure evolution and changes in mechanical properties in WC-Co composites during recycling by oxidation-reduction process and sintering**

**Joost, Renee; Pirso, Jüri; Viljus, Mart** 18th International Baltic Conference : Engineering Materials & Tribology : BALTMATTRIB-2009 : October 22-23, 2009, Tallinn, Estonia : abstracts 2009 / p. 29

### **Microstructure evolution in WC-Co composites during reactive sintering from nanocrystalline powders [Electronic resource]**

**Pirso, Jüri; Viljus, Mart; Joost, Renee; Juhani, Kristjan; Letunoviš, Sergei** Advances in Powder Metallurgy & Particulate Materials 2008 2008 / [12] p. : ill. [CD-ROM]

### **Microstructure evolution of TiC cermets with ferritic AISI 430L steel binder**

**Kolnes, Märt; Mere, Arvo; Kübarsepp, Jakob; Viljus, Mart; Maaten, Birgit; Tarraste, Marek** Powder metallurgy 2018 / p. 197-209 : ill <https://doi.org/10.1080/00325899.2018.1447268> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Microstructure evolution of WC-TiC-Co cemented carbides during reactive sintering [Electronic resource]**

**Tarraste, Marek; Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Traksmäa, Rainer; Letunoviš, Sergei** Proceedings of the 18th Plansee Seminar : International Conference on Refractory Metals and Hard Materials : Reutte/Austria, 3-7 June, 2013 2013 / p. HM 70/1-HM 70/7 [CD-ROM]

### **Microstructure formation and performance of reactive sintered titanium oxycarbide base ceramic-ceramic composites**

**Juhani, Kristjan; Kübarsepp, Jakob; Tarraste, Marek; Pirso, Jüri; Viljus, Mart** Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia 2019 / p. 131-135 : ill <https://www.scientific.net/KEM.799.131> [https://www.ester.ee/record=b5235278\\*est](https://www.ester.ee/record=b5235278*est) <https://doi.org/10.4028/www.scientific.net/KEM.799.131> [Conference proceeding at Scopus](#) [Article at Scopus](#)

### **Mikroskoopia kujutiste ja röntgenspektrogrammide töötlemine ja rakendamine materjalide uurimisel : aruanne : G444 : teadussuuna klass 1.2, 2.2**

**Viljus, Mart** 1994 [https://www.ester.ee/record=b2084735\\*est](https://www.ester.ee/record=b2084735*est)

### **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](#)

### **Optimization of hardmetal reinforcement content in Fe-based hardfacings for abrasive-impact wear conditions**

**Surženkov, Andrei; Tarbe, Riho; Tarraste, Marek; Simson, Taavi; Viljus, Mart; Kulu, Priit** European Conference on Heat Treatment 2016 and 3rd International Conference on Heat Treatment and Surface Engineering in Automotive Applications : 11-13 May 2016, Prague, Czech Republic, Břevnov Monastery 2016 / [10] p. : ill

### **Optimization of reinforcement content of powder metallurgy hardfacings in abrasive wear conditions**

**Simson, Taavi; Kulu, Priit; Surženkov, Andrei; Tarbe, Riho; Viljus, Mart; Tarraste, Marek; Goljandin, Dmitri** Proceedings of the Estonian Academy of Sciences 2016 / p. 90-96 : ill [https://artiklid.elnet.ee/record=b2768203\\*est](https://artiklid.elnet.ee/record=b2768203*est) <https://doi.org/10.3176/proc.2016.2.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Optimization of structure of hardmetal reinforced iron-based PM hardfacings for abrasive wear conditions**

**Simson, Taavi; Kulu, Priit; Surženkov, Andrei; Goljandin, Dmitri; Tarbe, Riho; Tarraste, Marek; Viljus, Mart** Engineering materials and tribology XXV 2017 / p. 351-355 <https://doi.org/10.4028/www.scientific.net/KEM.721.351> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Performance of ceramic-metal composites as potential tool materials for friction stir welding of aluminium, copper and**



## **stainless steel**

**Kolnes, Mart; Kübarsepp, Jakob; Sergejev, Fjodor; Kolnes, Märt; Tarraste, Marek; Viljus, Mart** Materials 2020 / art. 1994, 18 p. : ill <https://doi.org/10.3390/ma13081994> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Performance of tool steels strengthened by PVD coatings in adhesion and cyclic loading wear conditions**

**Tšinjan, Aleksei; Klaasen, Heinrich; Kübarsepp, Jakob; Adoberg, Eron; Talkop, Adolf; Viljus, Mart** Proceedings of EURO PM 2011 Congress & Exhibition : October 9-12, 2011, Barcelona, Spain 2011 / [6] p.: ill  
[https://www.researchgate.net/publication/286309089\\_Performance\\_of\\_tool\\_steels\\_strengthened\\_by\\_PVD\\_coatings\\_in\\_adhesion\\_and\\_cyclic\\_loading\\_wear\\_conditions](https://www.researchgate.net/publication/286309089_Performance_of_tool_steels_strengthened_by_PVD_coatings_in_adhesion_and_cyclic_loading_wear_conditions)

## **Phase evolution, microstructure characteristics and properties of Cr<sub>3</sub>C<sub>2</sub>-Ni cermets prepared by reactive sintering**

**Juhani, Kristjan; Pirso, Jüri; Letunoviš, Sergei; Viljus, Mart** International journal of materials & product technology 2011 / p. 75-91 : ill

## **Phases micromechanical properties of Ni-base superalloy measured by nanoindentation**

**Kommel, Lembit; Kimmari, Eduard; Viljus, Mart; Traksmaa, Rainer; Volobujeva, Olga; Kommel, Igor** Materials science = Medžiagotyra 2012 / p. 28-33 : ill <https://matsc.ktu.lt/index.php/MatSc/article/view/1337>

## **Phases properties of SC superalloy measured by nanoindentation**

**Kommel, Lembit; Kimmari, Eduard; Viljus, Mart** Materials engineering & Baltrib 2010 : materials of the XIX-th International Baltic Conference : October 28-29, 2010, Riga, Latvia 2010 / p. 22

## **Plasma-transferred arc-welded composite hardfacings with ZrB<sub>2</sub> and TiC reinforcements**

**Melakh, Liudmyla; Surzhenkov, Andrei; Juhani, Kristjan; Viljus, Mart; Traksmaa, Rainer; Vedel, Dmytro** Proceedings of the Estonian Academy of Sciences 2025 / p. 165-169 <https://doi.org/10.3176/proc.2025.2.15>

## **Preparation and properties of CdTe films on Mo/glass substrates**

**Valdna, Vello; Grossberg, Maarja; Hiie, Jaan; Kallavus, Urve; Mikli, Valdek; Traksmaa, Rainer; Viljus, Mart** Thin-film compound semiconductor photovoltaics - 2009 2009 / p. M08-24  
[https://www.researchgate.net/publication/231763435\\_Preparation\\_and\\_Properties\\_of\\_CdTe\\_Films\\_on\\_MoGlass\\_Substrates](https://www.researchgate.net/publication/231763435_Preparation_and_Properties_of_CdTe_Films_on_MoGlass_Substrates)

## **Preparation of nanocrystalline WC powder and ultrafine WC-Co hardmetals**

**Pirso, Jüri; Viljus, Mart; Letunoviš, Sergei** Nanopowders, Nanostructured Materials and Coatings : Network for Nanostructured Materials of ACC : March 17, 2005, Tallinn, Estonia : book of abstracts 2005 / p. 31-33 : ill

## **Pressurized sintering of TiC-base cermets**

**Klaasen, Heinrich; Kollo, Lauri; Kübarsepp, Jakob; Viljus, Mart** Proceedings of European Powder Metallurgy Congress : EURO PM2007 : Toulouse (France), 15-17 October 2007. Vol. 1 2007 / p. 215-220

## **Processing and mechanical characterization of WC–ZrO<sub>2</sub>–Ni hybrids**

**Hussainova, Irina; Kollo, Lauri; Smirnov, Anton; Viljus, Mart** World PM2010 proceedings. Vol. 3, Sintered Steel, PM Tool Materials 2010 / p. 583-590 [https://www.researchgate.net/publication/250226715\\_Processing\\_and\\_mechanical\\_characterization\\_of\\_WC\\_-\\_ZrO2-Ni\\_hybrids](https://www.researchgate.net/publication/250226715_Processing_and_mechanical_characterization_of_WC_-_ZrO2-Ni_hybrids)

## **Processing and properties of bulk ultrafine-grained pure niobium**

**Kommel, Lembit; Kimmari, Eduard; Saarna, Mart; Viljus, Mart** Journal of materials science 2013 / p. 4723-4729 : ill  
<https://doi.org/10.1007/s10853-013-7210-3> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Processing and tribological properties of chromium carbide based cermets**

**Hussainova, Irina; Pirso, Jüri; Viljus, Mart** Proceedings of World Congress on Powder Metallurgy and Particulate Materials, USA. Vol. 6 2002 / p. 166-173

## **Production of thermal spray Cr<sub>3</sub>C<sub>2</sub>-Ni powders by mechanically activated synthesis**

**Tkachivskyi, Dmytro; Juhani, Kristjan; Surženkov, Andrei; Kulu, Priit; Viljus, Mart; Traksmaa, Rainer; Jankauskas, Vytenis; Leišys, Rimtautas** Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia 2019 / p. 31-36 : ill <https://doi.org/10.4028/www.scientific.net/KEM.799.31>  
[https://www.ester.ee/record=b5235278\\*est](https://www.ester.ee/record=b5235278*est) <https://www.scientific.net/KEM.799.31> [Conference proceeding at Scopus](#) [Article at Scopus](#)

## **Reactive carburizing sintering**

**Pirso, Jüri; Viljus, Mart; Juhani, Kristjan; Letunoviš, Sergei** High temperature processes in chemical engineering 2010 / p. 309-334 : ill

## **Reactive carburizing sintering - a novel production method for high quality chromium carbide-nickel cermets**

**Pirso, Jüri; Viljus, Mart; Letunoviš, Sergei; Juhani, Kristjan** International journal of refractory metals & hard materials 2006 / 3, p. 263-270 : ill <https://www.sciencedirect.com/science/article/abs/pii/S0263436805000909>

### **Reactive sintering - a new method for producing Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Viljus, Mart; Pirso, Jüri; Letunovičs, Sergei** Engineering Materials & Tribology : BALTMATTRIB - 2003 : 12th International Baltic Conference : October 2-3, 2003, Tallinn, Estonia : abstracts 2003 / p. 29

### **Reactive sintering of bimodal WC-Co hardmetals**

**Tarraste, Marek; Juhani, Kristjan; Pirso, Jüri; Viljus, Mart** Medžiagotyra = Materials science 2015 / p. 382-385 : ill  
<https://doi.org/10.5755/j01.ms.21.3.7511> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Reactive sintering of Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Viljus, Mart; Pirso, Jüri** Abstracts of the 12th Joint Nordic Conference in Powder Technology : Tampere, Finland, 2003 2003 / p. 24

### **Reactive sintering of WC-Cr-Co hardmetals [Electronic resource]**

**Juhani, Kristjan; Pirso, Jüri; Tarraste, Marek; Viljus, Mart; Letunovičs, Sergei** Proceedings of the 18th Plansee Seminar : International Conference on Refractory Metals and Hard Materials : Reutte/Austria, 3-7 June, 2013 2013 / [CD-ROM]

### **Recrystallization of CdTe film under conditions of high temperature and mechanical pressure**

**Mikli, Valdek; Hiie, Jaan; Viljus, Mart; Nisumaa, Reet; Traksmäa, Rainer; Kallavus, Urve** Thin solid films 2008 / 20, p. 7041-7045 : ill

### **Recycling of hardmetal scrap to WC-Co powder by oxidation-reduction process**

**Joost, Renee; Pirso, Jüri; Viljus, Mart** Proceedings of the 6th International Conference of DAAAM Baltic "Industrial Engineering" : 24-26th April 2008, Tallinn, Estonia. [2] 2008 / p. 449-454 : ill  
[https://www.researchgate.net/publication/289593153\\_Recycling\\_of\\_hardmetal\\_scrap\\_to\\_wc-co\\_powder\\_by\\_oxidationreduction\\_process](https://www.researchgate.net/publication/289593153_Recycling_of_hardmetal_scrap_to_wc-co_powder_by_oxidationreduction_process)

### **Recycling of WC-Co hardmetals by oxidation and carbothermal reduction in combination with reactive sintering**

**Joost, Renee; Pirso, Jüri; Viljus, Mart; Letunovičs, Sergei; Juhani, Kristjan** Estonian journal of engineering 2012 / p. 127-139 : ill

### **Reliability of dual compounds "carbide composite+steel" produced by diffusion welding**

**Klaasen, Heinrich; Kübarsepp, Jakob; Laansoo, Andres; Viljus, Mart** International journal of refractory metals and hard materials 2010 / 5, p. 580-586 : ill

### **Residual stresses in TiC-based cermets measured by indentation**

**Sergejev, Fjodor; Kimmari, Eduard; Viljus, Mart** Procedia engineering 2011 / p. 2873-2881 : ill  
<https://www.sciencedirect.com/science/article/pii/S1877705811006655>

### **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](#)

### **Sintering of high Mn cemented carbides in Mn-rich environment**

**Tarraste, Marek; Kübarsepp, Jakob; Juhani, Kristjan; Kolnes, Märt; Viljus, Mart; Mere, Arvo** Defect and diffusion forum 2020 / p. 402-407 <https://doi.org/10.4028/www.scientific.net/DDF.405.402> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Sliding wear of chromium carbide based cermets under different wear conditions**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovičs, Sergei** Proceedings of the 6th International Conference of DAAAM Baltic "Industrial Engineering" : 24-26th April 2008, Tallinn, Estonia. [2] 2008 / p. 455-459 : ill  
<http://innomet.ttu.ee/daaam08/Online/Materials%20Engineering/Juhani.pdf>

### **Sliding wear of composite stainless steel hardfacing under room and elevated temperature**

**Surženkov, Andrei; Baroninš, Janis; Viljus, Mart; Traksmäa, Rainer; Kulu, Priit** Materials Engineering 2017 : selected, peer reviewed papers from the 26th International Baltic Conference on Materials Engineering 2017, October 26-27, Kaunas, Lithuania 2017 / p. 195-200 : ill <https://doi.org/10.4028/www.scientific.net/SSP.267.195> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Sliding wear of Cr<sub>3</sub>C<sub>2</sub>-Ni base cermets**

**Letunovičs, Sergei; Viljus, Mart; Pirso, Jüri** Medžiagotyra = Materials science 2002 / 4, p. 477-480 : ill

### **Sliding wear of Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Letunovičs, Sergei; Viljus, Mart; Pirso, Jüri** Abstracts of International Conference Materials Engineering and Tribology 2002 / p. 9

#### **Sliding wear of the cermets**

**Letunovič, Sergei; Pirso, Jüri; Viljus, Mart** Engineering Materials & Tribology : BALTMATTRIB - 2003 : 12th International Baltic Conference : October 2-3, 2003, Tallinn, Estonia : abstracts 2003 / p. 70

#### **Sliding wear of TiC-NiMo and Cr<sub>3</sub>C<sub>2</sub>-Ni cermet particles reinforced FeCrSiB matrix HVOF sprayed coatings**

**Surženkov, Andrei; Antonov, Maksim; Goljandin, Dmitri; Vilgo, Timo; Mikli, Valdek; Viljus, Mart; Latokartano, Jyrki; Kulu, Priit** Estonian journal of engineering 2013 / p. 203-211 : ill <https://doi.org/10.3176/eng.2013.3.03> [Article at Scopus](#)

#### **Sliding wear of TiC-NiMo cermets**

**Pirso, Jüri; Letunovič, Sergei; Viljus, Mart** Tribology international 2004 / p. 817-824 : ill

#### **Slurry erosion resistance of Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart** International Powder Metallurgy Congress & Exhibition : EURO PM2009 : 12th October - 14th October 2009, Copenhagen, Denmark : proceedings. Vol.1 2009 / p. 305-310 : ill  
[https://www.researchgate.net/publication/288472950\\_Slurry\\_erosion\\_resistance\\_of\\_Cr3C2-Ni\\_cermets](https://www.researchgate.net/publication/288472950_Slurry_erosion_resistance_of_Cr3C2-Ni_cermets)

#### **Slurry erosion wear of TiC-NiMo and WC-Co cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart** Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [Il] 2010 / p. 456-461 : ill

#### **Slurry erosion-corrosion of TiC-NiMo cermets**

**Pirso, Jüri; Viljus, Mart; Kübarsepp, Jakob** Advances in Powder Metallurgy & Particulate Materials - 1999. Part 11, Cermets & Refractory Metals 1999 / p. 11-29 - 11-35 : ill

#### **Species-specific morphology of the endolymphatic openings in the headshields of the osteostracan genus Tremataspis (Agnatha), from the Silurian of Estonia**

**Märss, Tiit; Wilson, Mark V.H.; Viljus, Mart** 16th International Symposium on Early and Lower Vertebrates - Honoring Tiit Märss & Philippe Janvier : Conference programme and abstracts : Valencia, Spain, 2022 2022 / p. 6 [http://iselv.uv.es/wp-content/uploads/2022/06/Abstract-Book-16ISELV\\_web.pdf](http://iselv.uv.es/wp-content/uploads/2022/06/Abstract-Book-16ISELV_web.pdf)

#### **Steels, hardmetals and hardfacings for abrasive wear applications**

**Kulu, Priit; Tarbe, Riho; Saarna, Mart; Surženkov, Andrei; Peetsalu, Priidu; Viljus, Mart** European Conference on Heat Treatment and 21st IFHTSE Congress : May, 12th-15th, 2014, Munich, Germany : proceedings 2014 / p. 449-456 : ill

#### **Structure and properties evolution of superalloy in zone of uniform deformation by electroupsetting**

**Kommel, Lembit; Viljus, Mart** EUROMAT 2001 : 7th European Conference on Advanced Materials and Processes : Rimini, Italy, 10-14 June, 2001 : conference abstracts 2001 / p. 402-403

#### **Structure and properties evolution of superalloy in zone of uniform deformation by electroupsetting [Electronic resource]**

**Kommel, Lembit; Viljus, Mart** Proceedings of 7th European Conference on Advanced Materials and Processes : EUROMAT 2001 : Italy 2001 / [CD-ROM]

#### **Structure formation and characteristics of chromium carbide-iron-titanium cermets**

**Kolnes, Märt; Pirso, Jüri; Kübarsepp, Jakob; Viljus, Mart; Traksmäa, Rainer** Proceedings of the Estonian Academy of Sciences 2016 / p. 138-143 : ill <https://doi.org/10.3176/proc.2016.2.09> [https://artiklid.elnet.ee/record=b2768217\\*est](https://artiklid.elnet.ee/record=b2768217*est) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Structure formation and distribution of elements in the TiC-NiMo cemented carbides**

**Viljus, Mart; Pirso, Jüri** Powder Technology 95 : Vth Baltic Conference, November 7-8, 1995, Tallinn 1995 / I. 24-25  
[https://www.ester.ee/record=b1492085\\*est](https://www.ester.ee/record=b1492085*est)

#### **Structure formation in Ti-C-Ni-Mo composites during reactive sintering**

**Viljus, Mart; Pirso, Jüri; Juhani, Kristjan; Letunovič, Sergei** Materials science = Medžiagotyra 2012 / p. 62-65 : ill

#### **Structure formation of Cr<sub>3</sub>C<sub>2</sub> - base cermets during sintering**

**Pirso, Jüri; Viljus, Mart** Proceedings of 2000 Powder Metallurgy World Congress : November 12-16, 2000, Kyoto, Japan. Part 2 2000 / p. 1265-1268 : ill

#### **Study of submerged and plasma arc welded composite hardfacings with a novel Cr<sub>3</sub>C<sub>2</sub>-Ni reinforcement**

**Bendikiene, Regita; Surženkov, Andrei; Tkachivskyi, Dmytro; Juhani, Kristjan; Viljus, Mart; Traksmäa, Rainer; Antonov, Maksim; Kulu, Priit** Proceedings of the Estonian Academy of Sciences 2019 / p. 150-157 : ill <https://doi.org/10.3176/proc.2019.2.06> [http://www.kirj.ee/public/proceedings\\_pdf/2019/issue\\_2/proc-2019-2-150-157.pdf](http://www.kirj.ee/public/proceedings_pdf/2019/issue_2/proc-2019-2-150-157.pdf) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **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](#)

**Synergistic effect of Nb and Mo on the microstructural formation of the Ti(C,N)-high chromium ferrous-based cermets**  
**Maurya, Himanshu Singh; Juhani, Kristjan; Tarraste, Marek; Viljus, Mart; Sergejev, Fjodor; Pampori, Tabeen Halawat; Hussain, Abrar; Kübarsepp, Jakob** International journal of refractory metals and hard materials 2024 / art. 106723  
<https://doi.org/10.1016/j.ijrmhm.2024.106723> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Synthesis of an WC-Co composite material from the waste WC-Co bulk hardmetal**  
**Joost, Renee; Pirso, Jüri; Viljus, Mart** 17th International Baltic Conference : Materials Engineering 2008 : November 6-7, Kaunas, Lithuania : abstracts of papers 2008 / p. 28

**Synthesis of nanocrystalline TiC powders by reactive milling**  
**Viljus, Mart; Pirso, Jüri; Letunovičs, Sergei** Nanopowders, Nanostuctured Materials and Coatings : Network for Nanostructured Materials of ACC : March 17, 2005, Tallinn, Estonia : book of abstracts 2005 / p. 28-30 : ill

**Synthesis of TiC by mechanical activation of powder components**  
**Viljus, Mart; Traksmäa, Rainer; Letunovičs, Sergei; Pirso, Jüri** EURO PM2001 : [European Congress and Exhibition on Powder Metallurgy] : October 22-24, 2001, Nice, France. Vol. 1 : proceedings 2001 / p. 194-198 : ill

**Synthesis of TiC powder by mechanical activation**  
**Viljus, Mart; Traksmäa, Rainer; Letunovičs, Sergei; Pirso, Jüri** Materials Engineering & Balttrib 2001 : materials of the X-th International Baltic Conference : September 27-28, Jurmala, Latvia 2001 / p. 18-21 : ill

**ZnCdSeTe radiation detectors**  
**Valdna, Vello; Hiie, Jaan; Strandberg, Marek; Traksmäa, Rainer; Viljus, Mart** Optoelectronic Devices : Physics, Fabrication and Application. III 2006 / [6] p [https://www.researchgate.net/publication/253057744\\_ZnCdSeTe\\_radiation\\_detectors](https://www.researchgate.net/publication/253057744_ZnCdSeTe_radiation_detectors)

**ZnCdSeTe semiconductor compounds : preparation and properties**  
**Valdna, Vello; Grossberg, Maarja; Hiie, Jaan; Kallavus, Urve; Mikli, Valdek; Raadik, Taavi; Traksmäa, Rainer; Viljus, Mart** MRS proceedings 2011 / p. u07-15 <https://www.cambridge.org/core/journals/mrs-online-proceedings-library-archive/article/abs/zncdsete-semiconductor-compounds-preparation-and-properties/49279438DA7FE99A846F54C38F77A46D>

**Technological peculiarities of chromium carbide-based iron alloy bonded cermet**  
**Kolnes, Märt; Kübarsepp, Jakob; Viljus, Mart; Traksmäa, Rainer** Materials Engineering 2017 : selected, peer reviewed papers from the 26th International Baltic Conference on Materials Engineering 2017, October 26-27, Kaunas, Lithuania 2017 / p. 82-86 : ill  
<https://doi.org/10.4028/www.scientific.net/SSP.267.82> [Conference proceedings at Scopus](#) [Article at Scopus](#)

**Template synthesis of titanium dioxide coatings and determination of their photocatalytic activity by aqueous oxidation of humic acid**  
**Budarnaja, Olga; Klauson, Deniss; Dedova, Tatjana; Kärber, Erki; Viljus, Mart; Preis, Sergei** Kinetics and catalysis 2014 / p. 688-694 : ill <https://doi.org/10.1134/S0023158414050036> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**The conservation of early post-medieval period coins found in Estonia**  
**Viljus, Aive; Viljus, Mart** Journal of conservation and museum studies 2012 / p. 30-44 : ill <https://jcms-journal.com/articles/10.5334/jcms.1021204>

**The effect of carbon content on the mechanical and tribological properties of WC-Co cemented carbides**  
**Joost, Renee; Pirso, Jüri; Viljus, Mart** Proceedings of Nordtrib 2008 : 13th Nordic Symposium on Tribology : Tampere, Finland, 10-13 June, 2008 2008 / [8] p. : ill

**The effect of the firing temperature on the hardness of alumina porcelain**  
**Štubna, Igor; Šin, Peter; Viljus, Mart; Trnik, Anton** Materials and technology = Materiali in tehnologije 2014 / p. 331-336 : ill  
<http://mit.imt.si/izvodi/mit143/stubna.pdf> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**The effect of VC, TiC and Cr3C2 on the microstructure and properties of WC-15Co hardmetals fabricated by the reactive sintering**  
**Pirso, Jüri; Juhani, Kristjan; Tarraste, Marek; Viljus, Mart; Letunovičs, Sergei** Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 383-388 : ill

**The effect of VC, TiC and Cr3C2 on the microstructure and properties of WC-15CO hardmetals fabricated by the reactive sintering**  
**Pirso, Jüri; Juhani, Kristjan; Tarraste, Marek; Viljus, Mart; Letunovičs, Sergei** Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 383-388 : ill



#### **The formation of reactive sintered (Ti, Mo)C-Ni cermet from nanocrystalline powders**

**Jõelet, Marek; Pirso, Jüri; Juhani, Kristjan; Viljus, Mart; Traksmäa, Rainer** International journal of refractory metals and hard materials 2014 / p. 284-290 : ill <https://doi.org/10.1016/j.jirmhm.2013.12.016> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **The influence of carbon and molybdenum in reactive sintered (Ti, Mo)C-NiCr cermets [Electronic resource]**

**Jõelet, Marek; Pirso, Jüri; Juhani, Kristjan; Viljus, Mart** Euro PM2015 Congress & Exhibition : proceedings : 4-7 October 2015, Reims Congress Centre, Reims, France 2015 / [USB]

#### **The influence of content and production parameters on the structure and mechanical properties of TiC-NiMo cemented carbides**

**Pirso, Jüri; Viljus, Mart** Tallinna Tehnikaülikooli Toimetised 1994 / lk. 77-90: ill

#### **The influence of Cr<sub>3</sub>C<sub>2</sub> and VC as alloying additives on the microstructure and properties of reactive sintered WC-Co cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovits, Sergei; Tarraste, Marek** Materials science = Medžiagotyra 2012 / p. 79-83 : ill <https://matsc.ktu.lt/index.php/MatSc/article/view/1347>

#### **The influence of high energy milling and sintering parameters on reactive sintered (Ti, Mo)C-Ni cermets**

**Jõelet, Marek; Pirso, Jüri; Juhani, Kristjan; Viljus, Mart; Traksmäa, Rainer** Journal of alloys and compounds 2015 / p. 381-386 : ill <https://doi.org/10.1016/j.jallcom.2015.02.071> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **The influence of processing parameters on mechanical properties of spark plasma sintered chromium carbide based cermets**

**Juhani, Kristjan; Pirso, Jüri; Tarraste, Marek; Viljus, Mart; Letunovits, Sergei** Materials Engineering 2017 : selected, peer reviewed papers from the 26th International Baltic Conference on Materials Engineering 2017, October 26-27, Kaunas, Lithuania 2017 / p. 162-166 <https://doi.org/10.4028/www.scientific.net/SSP.267.162> [Conference proceedings at Scopus](#) [Article at Scopus](#)

#### **The influence of reactive sintering parameters on the structure and properties of Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Viljus, Mart; Letunovits, Sergei; Traksmäa, Rainer; Pirso, Jüri** Abstracts of International Conference Materials Engineering and Tribology 2002 / p. 15

#### **The influence of reactive sintering parameters on the structure and properties of Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Viljus, Mart; Letunovits, Sergei; Traksmäa, Rainer; Pirso, Jüri** Medžiagotyra = Materials science 2002 / 4, p. 473-476 : ill

#### **The influence of Sinter/HIP sintering on the properties of chromium carbide based cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart** Proceedings of European Powder Metallurgy Congress : EURO PM2007 : Toulouse (France), 15-17 October 2007. Vol. 1 2007 / p. 209-213

#### **The influence of sinter/HIP technology on reactive sintering of chromium carbide based cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovits, Sergei** 18th International Baltic Conference : Engineering Materials & Tribology : BALTMATRIB-2009 : October 22-23, 2009, Tallinn, Estonia : abstracts 2009 / p. 23

#### **The influence of sintering temperature of reactive sintered (Ti, Mo)C-Ni cermets**

**Jõelet, Marek; Pirso, Jüri; Juhani, Kristjan; Viljus, Mart** Medžiagotyra = Materials science 2015 / p. 435-438 : ill <https://doi.org/10.5755/j01.ms.21.3.7179> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **The influence of TiC powder to reactive sintered TiC-NiMo cermets microstructure and mechanical properties [Electronic resource]**

**Jõelet, Marek; Pirso, Jüri; Juhani, Kristjan; Viljus, Mart** Proceedings of the 18th Plansee Seminar : International Conference on Refractory Metals and Hard Materials : Reutte/Austria, 3-7 June, 2013 2013 / p. HM 71/1-HM 71/7 [CD-ROM]

#### **The microstructure and properties of fine-grained cermets**

**Viljus, Mart** 2003

#### **The structure and properties of recycled hardmetals**

**Joost, Renee; Pirso, Jüri; Viljus, Mart** 17th Plansee Seminar : International Conference on High Performance P/M Materials : Reutte, Austria, 25-29.05.2009 : proceedings. Vol. 2 2009 / p. HM25/1-HM25/7

#### **The structure formation of TiC-NiMo hardmetals during the sintering process**

**Viljus, Mart; Pirso, Jüri; Traksmäa, Rainer** Proceedings of Joint Nordic Conference in Powder Technology : May 5-6, 1999, Oslo, Norway 1999 / p. 13

#### **The study of the laser hardening parameters on the structure and the mechanical properties of the PM steel Vanadis 6**

**Surženkov, Andrei; Latokartano, Jyrki; Vuoristo, Petri; Kulu, Priit; Viljus, Mart; Vallikivi, Ahto** 18th International Baltic Conference

**Thermal behavior of ceramic bodies based on Estonian clay from the Arumetsa deposit with oil shale ash and clinker dust additives**

**Kaljuvee, Tiit; Uibu, Mai; Einard, Marve; Traksmäa, Rainer; Viljus, Mart;** Jefimova, Jekaterina; **Trikkel, Andres** Processes 2022 / art. 46 <https://doi.org/10.3390/pr10010046> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Thermal behaviour of ceramic bodies based on Estonian clay from Arumetsa deposit with oil shale ash or/and clinker dust additives**

**Kaljuvee, Tiit; Štubna, Igor; Hulan, Tomaš; Uibu, Mai; Einard, Marve; Traksmäa, Rainer; Viljus, Mart;** Jefimova, Jekaterina; **Trikkel, Andres** ICTAC 2020 : 17th International Congress on Thermal Analysis and Calorimetry : 8th Joint Czech-Hungarian-Polish-Slovakian Thermoanalytical Conference (V4 8) : 14th Conference on Calorimetry and Thermal Analysis of the Polish Society of Calorimetry and Thermal Analysis (CCTA 14), online conference, [Kraków], 29 August - 2 September 2021 : e-book of abstracts, 2021 2021 / p. 68 [https://cris.vub.be/ws/portalfiles/portal/74787050/\\_e\\_Book\\_of\\_Abstracts\\_ICTAC2020.pdf](https://cris.vub.be/ws/portalfiles/portal/74787050/_e_Book_of_Abstracts_ICTAC2020.pdf)

**Three-body abrasive wear of cermets**

**Pirso, Jüri; Viljus, Mart; Letunovičs, Sergei; Juhani, Kristjan; Joost, Renee** Wear 2011 / p. 2868-2878 : ill

**Three-body abrasive wear of reactive sintered WC-Co hardmetals with grain growth inhibitors**

**Juhani, Kristjan; Pirso, Jüri; Tarraste, Marek; Viljus, Mart; Suurkivi, Taavi** Engineering materials & tribology XXII 2014 / p. 277-282 <https://doi.org/10.4028/www.scientific.net/KEM.604.277> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Conference proceedings at WOS](#) [Article at WOS](#)

**Three-body abrasive wear of TiC-NiMo cermets**

**Pirso, Jüri; Viljus, Mart; Juhani, Kristjan; Kuningas, Marius** Tribology international 2010 / 1/2, p. 340-346 : ill

**Three-body abrasive wear of WC-Co composites manufactured by reactive sintering of nanocrystalline powders [Electronic resource]**

**Juhani, Kristjan; Joost, Renee; Pirso, Jüri; Letunovičs, Sergei; Viljus, Mart; Tarraste, Marek** 5th World Tribology Congress, WTC 2013 : [proceedings]. Vol. 3 2014 / p. 2084-2087. [CD-ROM]

**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, Isif 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 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://fntdk.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

#### **Two body dry abrasive wear of TiC-NiMo cermets**

**Pirso, Jüri; Viljus, Mart; Juhani, Kristjan** Tribology - materials, surfaces & interfaces 2007 / 2, p. 68-72

#### **Two-body abrasive wear of WC-Co hardmetals in wet and dry environments**

**Pirso, Jüri; Juhani, Kristjan; Viljus, Mart; Letunovitš, Sergei** Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2 2012 / p. 711-716 : ill

#### **Two-body dry abrasive wear of cermets**

**Pirso, Jüri; Viljus, Mart; Juhani, Kristjan; Letunovitš, Sergei** Wear 2009 / 1/2, p. 21-29 : ill

#### **Two-body dry abrasive wear of Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei** Proceedings of the Estonian Academy of Sciences. Engineering 2006 / 4, p. 368-376 : ill

#### **Two-body dry abrasive wear of Cr<sub>3</sub>C<sub>2</sub>-Ni cermets**

**Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovitš, Sergei** 15th International Baltic Conference "Engineering Materials & Tribology. Baltmattrib - 2006" : October 5-6, 2006, Tallinn, Estonia : abstracts 2006 / p. 58-59 : ill

#### **Ultrafine cemented carbides with cobalt and iron binders prepared via reactive in situ sintering**

**Tarraste, Marek; Kübarsepp, Jakob; Mere, Arvo; Juhani, Kristjan; Kolnes, Märt; Viljus, Mart** Solid state phenomena ; 320 2021 / p. 176-180 <https://doi.org/10.4028/www.scientific.net/SSP.320.176> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

#### **Uus meetod kuubiliste ZnS monokristallide kasvatamiseks**

**Lott, Kalju; Paat, Aadu; Viljus, Mart; Gorokhova, Elena; Ananjeva, G.** XXV Eesti keemiapäevad : teaduskonverentsi ettekannete referaadid = 25th Estonian Chemistry Days : abstracts of scientific conference 1999 / lk. 87-88

#### **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 behavior of ceramic-metal composites as tool material for FSW of copper**

**Kolnes, Mart; Kübarsepp, Jakob; Sergejev, Fjodor; Kolnes, Märt; Tarraste, Marek; Viljus, Mart** Solid state phenomena ; 320 2021 / p. 144–149 <https://doi.org/10.4028/www.scientific.net/SSP.320.144> [Conference proceedings at Scopus](#) [Article at Scopus](#)

#### **Wear behaviour of Cr<sub>3</sub>C<sub>2</sub>-Ni cermet reinforced hardfacings**

**Bendikiene, Regita; Ciuplys, Antanas; Sertytis, Rolandas; Surženkov, Andrei; Tkachivskyi, Dmytro; Viljus, Mart; Traksmaa, Rainer; Antonov, Maksim; Kulu, Priit** Journal of materials research and technology 2020 / p. 7068-7078 : ill  
<https://doi.org/10.1016/j.jmrt.2020.05.042> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Wear mechanisms of PM-HIP tool steels under low and high-stress abrasion : role of carbide type and content**

**Kumar, Rahul, 1993-; Antonov, Maksim; Berglund, Tomas; Pampori, Tabeen Halawat; Maurya, Himanshu Singh; Viljus, Mart** Journal of materials research and technology 2025 / p. 7016-7025 <https://doi.org/10.1016/j.jmrt.2025.04.317>

#### **Wear performance of TiC-base cermets**

**Roosaar, Tõnu; Kübarsepp, Jakob; Klaasen, Heinrich; Viljus, Mart** Materials science 2008 / p. 238-241 : ill

#### **Wear performance of TiC-base cermets**

**Roosaar, Tõnu; Kübarsepp, Jakob; Klaasen, Heinrich; Viljus, Mart** 17th International Baltic Conference : Materials Engineering 2008 : November 6-7, Kaunas, Lithuania : abstracts of papers 2008 / p. 32

#### **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](#)

#### **Wear resistance and mechanisms of composite hardfacings at abrasive impact erosion wear**

**Surženkov, Andrei; Viljus, Mart; Simson, Taavi; Tarbe, Riho; Saarna, Mart; Casesnoves, Francisco** Journal of physics : conference series 2017 / art. 012060, p. 1-10 : ill <https://doi.org/10.1088/1742-6596/843/1/012060> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

#### **Wear resistance of HVOF sprayed coatings from mechanically activated thermally synthesized Cr<sub>3</sub>C<sub>2</sub>-Ni spray powder**

**Sarjas, Heikki; Kulu, Priit; Juhani, Kristjan; Viljus, Mart;** Matikainen, Ville; Vuoristo, Petri Proceedings of the Estonian Academy of Sciences 2016 / p. 101-106 : ill [https://artiklid.elnet.ee/record=b2768209\\*est](https://artiklid.elnet.ee/record=b2768209*est) <https://doi.org/10.3176/proc.2016.2.10> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Wear resistance of sintered composite hardfacings under different abrasive wear conditions**

**Simson, Taavi; Kulu, Priit; Surženkov, Andrei; Tarbe, Riho; Goljandin, Dmitri; Tarraste, Marek; Viljus, Mart; Traksmäa, Rainer** Medžiagotyra = Materials science 2017 / p. 249-253 : ill <https://doi.org/10.5755/j01.ms.23.3.17640> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Wear resistant self-fluxing alloy based TiC-NiMo and Cr<sub>2</sub>C<sub>3</sub>-Ni hardmetal particles reinforced composite coatings**

**Surženkov, Andrei; Vallikivi, Ahto; Mikli, Valdek; Viljus, Mart; Vilgo, Timo; Kulu, Priit** Proceedings of the 2nd International Scientific Conference Manufacturing Engineering & Management 2012 : ICMEM 2012 2012 / p. 33-36 : ill [https://www.researchgate.net/publication/262731588\\_WEAR\\_RESISTANT\\_SELF-FLUXING\\_ALLOY\\_BASED\\_TIC-NIMO\\_AND\\_CR2C3-NI\\_HARDMETAL\\_PARTICLES\\_REINFORCED\\_COMPOSITE\\_COATINGS](https://www.researchgate.net/publication/262731588_WEAR_RESISTANT_SELF-FLUXING_ALLOY_BASED_TIC-NIMO_AND_CR2C3-NI_HARDMETAL_PARTICLES_REINFORCED_COMPOSITE_COATINGS)

**Влияние легирующих элементов на структуру и свойства сплавов TiC-Ni-Mo**

**Pirso, Jüri; Viljus, Mart** Износостойкие порошковые материалы и покрытия : тезисы докладов второй конференции Балтийских республик 1991 / с. 8-9

**[Репродукции]**

**Viljus, Mart** Радуга 2005 / 2, с. 34-35, 38-39, 42-43, 46-47