

Abrasion and erosion resistance of cermets : a review

Kübarsepp, Jakob; Juhani, Kristjan; Tarraste, Marek Materials 2022 / art. 69 <https://doi.org/10.3390/ma15010069> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Abrasion of cermets

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

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

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 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-erosive wear of thermally sprayed coatings from experimental and commercial Cr₃C₂-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

Additive manufacturing of CMCs with bimodal microstructure

Maurya, Himanshu Singh; Vikram, R. J.; Kosiba, Konrad; Juhani, Kristjan; Sergejev, Fjodor; Suwas, Satyam; Prashanth, Konda Gokuldoss Journal of alloys and compounds 2023 / art. 168416, 5 p. : ill <https://doi.org/10.1016/j.jallcom.2022.168416> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Additive manufacturing of TiC-based cermet with stainless steel as a binder material

Maurya, Himanshu Singh; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Materials today: proceedings 2022 / p. 824-828 <https://doi.org/10.1016/j.matpr.2022.02.428> Conference proceeding at Scopus Article at Scopus Article at WOS

Additive manufacturing of TiC-based cermets : a detailed comparison with spark plasma sintered samples

Maurya, Himanshu Singh; Jayaraj, Jayamani; Vikram, Raja Jothi; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Journal of alloys and compounds 2023 / art. 170436 <https://doi.org/10.1016/j.jallcom.2023.170436> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Additive manufacturing of TiC-based cermets with Fe-based binders using novel laser scan techniques =

Titaankarbiidsete Fe-baasil sideainega kermiste valmistamine uudse laserskaneeriva kihtlisandustehnoloogia teel
Maurya, Himanshu Singh 2023 <https://doi.org/10.23658/taltech.61/2023> <https://digikogu.taltech.ee/et/Item/3dad7b12-4a7a-4c9d-8162-30388c52bf5e> https://www.ester.ee/record=b5645217*est

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 TiO₂

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

Application of Taguchi method for in-situ synthesis of TiC from TiO₂–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

Binder jetting 3D printing of green TiC-FeCr based cermets- Effect of sintering temperature and systematic comparison study with Laser powder bed fusion fabricated parts

Maurya, Himanshu Singh; Marczyk, J.; Juhani, Kristjan; Sergejev, Fjodor; Kumar, R.; Hussain, Abrar; Akhtar, F.; Hebda, M.; Prashanth, Konda Gokuldoss Materials Today Advances 2025 / art. 100562 <https://doi.org/10.1016/j.mtadv.2025.100562>

Cermets with Fe-alloy binder : a review

Kübarsepp, Jakob; Juhani, Kristjan International journal of refractory metals and hard materials 2020 / art. 105290, 25 p. : ill <https://doi.org/10.1016/j.ijrmhm.2020.105290> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Comparative study of plasma clad Fe-based composite hardfacings with in situ synthesized Cr and Ti carbide reinforcement

Tkachivskyi, Dmytro; Viljus, Mart; Traksmas, 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](#)

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; Traksmas, 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](#)

Development of cemented carbides with high chromium iron alloy binder = Kõrge kroomisisaldusega rauasulamsideainega kõvasulamite arendus

Tarraste, Marek 2018 <https://digi.lib.ttu.ee/i/?9959> https://www.ester.ee/record=b5138025*est

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](#)

EBSI investigation of microstructure and microtexture evolution on additively manufactured TiC-Fe based cermets—Influence of multiple laser scanning

Maurya, Himanshu Singh; Vikram, R. J.; Kumar, Rahul, 1993-; Rahmani Ahranjani, Ramin; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Micron 2024 / art. 103613 <https://doi.org/10.1016/j.micron.2024.103613> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 high chromium content additions in iron-bonded Ti(C,N) cermets: a hardness-toughness tradeoff

Pampori, Tabeen Halawat; Kolnes, Märt; Juhani, Kristjan; Tarraste, Marek; Kübarsepp, Jakob Proceedings of the Estonian Academy of Sciences 2025 / p. 170-174 : ill <https://doi.org/10.3176/proc.2025.2.16>

Effect of laser heat treatment on AlxTi1-xN-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](#)

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

Yöyler, Sibel; Surzhenkov, Andrei; Viljus, Mart; Traksmas, 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-A5WzJ>

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 TiC-based cermets in SiO₂ medium

Antonov, Maksim; Hussainova, Irina; Pirso, Jüri; Juhani, Kristjan Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [II] 2010 / p. 510-515 : ill

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 oxidation on abrasive wear of TiC-based cermets at various temperatures

Antonov, Maksim; Hussainova, Irina; Pirso, Jüri; Juhani, Kristjan Proceedings of 14th Nordic Symposium on Tribology : NORDTRIB 2010 : 08.06-11.06.2010, Storforsen, Sweden 2010 / p. 0054 [CD-ROM]

Effect of powder bed preheating on the crack formation and microstructure in ceramic matrix composites fabricated by laser powder-bed fusion process

Maurya, Himanshu Singh; Kosiba, Konrad; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Additive manufacturing 2022 / art. 103013, 13 p. : ill <https://doi.org/10.1016/j.addma.2022.103013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of preheating and cooling of the powder bed by laser pulse shaping on the microstructure of the TiC based cermets

Maurya, Himanshu Singh; Kollo, Lauri; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Ceramics international 2022 / p. 20612-20618 <https://doi.org/10.1016/j.ceramint.2022.04.029> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of sinter/HIP technology on properties of TiC-NiMo cermets

Kollo, Lauri; Pirso, Jüri; Juhani, Kristjan Materials science forum 2007 / Progress in powder metallurgy, p. 1169-1172 : ill

Effect of the laser processing parameters on the selective laser melting of TiC-Fe-based cermets

Maurya, Himanshu Singh; Kollo, Lauri; Tarraste, Marek; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Journal of manufacturing and materials processing 2022 / art. 35, 11 p. : ill <https://doi.org/10.3390/jmmp6020035> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Erosion and abrasion of chromium carbide based cermets produced by different methods

Hussainova, Irina; Pirso, Jüri; Antonov, Maksim; Juhani, Kristjan; Letunovitš, Sergei Wear 2007 / 2, p. 905-911 : ill

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](#)

Exploring microstructural properties, phase transformations, and wettability in high-chromium content iron-bonded Ti(C,N)-based cermet

Pampori, Tabeen Halawat; Kolnes, Märt; Juhani, Kristjan; Tarraste, Marek; Maurya, Himanshu Singh; Kübarsepp, Jakob Journal of the Japan Society of Powder and Powder Metallurgy 2025 / p. S1533-S1540 <https://doi.org/10.2497/jjspm.16P-T14-06>

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.ijrmhm.2018.02.010> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Forming ability of the WC-based ceramic metal composites with different Fe-based binders by unique laser beam modulation

Maurya, Himanshu Singh; Juhani, Kristjan; Sergejev, Fjodor; Kumar Yadav, Mayank; Hussain, Abrar; Prashanth, Konda Gokuldoss Next Materials 2025 / art. 100524 <https://doi.org/10.1016/j.nxmate.2025.100524>

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://doi.org/10.4028/www.scientific.net/KEM.799.136> [Conference proceeding at Scopus](#) [Article at Scopus](#)

High temperature erosion of Ti(Mo)C-Ni cermets

Hussainova, Irina; Pirso, Jüri; Antonov, Maksim; Juhani, Kristjan Wear 2009 / 11, p. 1894-1899 : ill

HVOF sprayed Fe-Based wear-resistant coatings with carbide reinforcement, synthesized in situ and by mechanically activated synthesis

Tkachivskiy, Dmytro; Juhani, Kristjan; Surženkov, Andrei; Kulu, Priit; Antonov, Maksim; Goljandin, Dmitri Coatings 2020 / art. 1092, 15 p. : ill <https://doi.org/10.3390/coatings10111092> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Impact of Nb content on the morphology and properties of Ti (C0.5N0.5)-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; Letunovitš, Sergei Materials science 2008 / p. 341-344 : ill

Impact wear of chromium carbide based cermets

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

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

Influence of sintering technology on cermet performance

Kübarsepp, Jakob; Pirso, Jüri; Juhani, Kristjan BALTTTRIB'2013 : VII International Scientific Conference : 14-15 November 2013, Kaunas, Lithuania : proceedings 2013 / p. 56-61
https://www.researchgate.net/publication/384980961_Influence_of_sintering_technology_on_cermet_performance

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>

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 the tribological behavior of the additively manufactured TiC-based cermets by scratch testing

Maurya, Himanshu Singh; Jayaraj, Jayamani; Wang, Z.; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Journal of alloys and compounds 2023 / art. 170496, 9 p. : ill <https://doi.org/10.1016/j.jallcom.2023.170496> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

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 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; Letunovitš, Sergei International Powder Metallurgy Congress & Exhibition : EURO PM2008 : 29th September - 1st October 2008, Mannheim, Germany : proceedings. Vol.3 2008 / p. 89-94 : ill

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

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

Microstructure evolution of WC-TiC-CO cemented carbides during reactive sintering

Tarraste, Marek; Juhani, Kristjan; Pirso, Jüri TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p. : ill

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

Tarraste, Marek; Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Traksmäa, Rainer; Letunovitš, 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://doi.org/10.4028/www.scientific.net/KEM.799.131> Conference proceeding at Scopus Article at Scopus

Microstructure formation of (Ti, Mo)C-Ni cermet

Jõelet, Marek; Pirso, Jüri; Juhani, Kristjan TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p. : ill

Miks kodumasinad aina vähem vastu peavad? "Probleem on sarnane kiirmoe edukusega."

digi.geenius.ee 2023 [Miks kodumasinad aina vähem vastu peavad? "Probleem on sarnane kiirmoe edukusega."](#)

Novel WC-Co spray powders and HVOF sprayed coatings on their bases

Sarjas, Heikki; Kulu, Priit; Juhani, Kristjan; Vuoristo, Petri 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. 35-42 : ill

Optimization of WC-Ni-ZrO₂ structure

Voltšihin, Nikolai; Hussainova, Irina; Traksmäa, Rainer; Juhani, Kristjan ECCM15 - 15th European Conference on Composite Materials : Venice, Italy, 24-28 June 2012 2012 / 8 p. : ill <http://www.escm.eu/eccm15/data/assets/296.pdf>

Phase evolution, microstructure characteristics and properties of Cr₃C₂-Ni cermets prepared by reactive sintering

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

Plasma-transferred arc-welded composite hardfacings with ZrB₂ and TiC reinforcements

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

Preparation of multiphase lightweight c-BN-based composite

Juhani, Kristjan; Kimmari, Eduard; Kommel, Lembit International Powder Metallurgy Congress & Exhibition : EURO PM2008 : 29th September - 1st October 2008, Mannheim, Germany : proceedings. Vol.1 2008 / p. 231-236 : ill
https://www.researchgate.net/publication/286152881_Preparation_of_multiphase_lightweight_c-BN-based_composite

Production of thermal spray Cr₃C₂-Ni powders by mechanically activated synthesis

Tkachivskyi, Dmytro; Juhani, Kristjan; Surzhenkov, Andrei; Kulu, Priit; Viljus, Mart; Traksmäa, 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.scientific.net/KEM.799.31> Conference proceeding at Scopus Article at Scopus

Reactive carburizing sintering

Pirso, Jüri; Viljus, Mart; Juhani, Kristjan; Letunovitš, 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; Letunovitš, 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 sintered chromium and titanium carbide-based cermets = Reaktsioonpaagutatud kroom- ja titaankarbiidsed kermised

Juhani, Kristjan 2009 https://www.ester.ee/record=b2498183*est

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 WC-Cr-Co hardmetals [Electronic resource]

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

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

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

Selective laser melting of TiC-based cermet : HIP studies

Maurya, Himanshu Singh; Kollo, Lauri; Tarraste, Marek; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss

Transactions of the Indian Institute of Metals 2023 / p. 565–570 : ill <https://doi.org/10.1007/s12666-022-02684-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Selective laser melting of TiC-Fe via laser pulse shaping : microstructure and mechanical properties

Maurya, Himanshu Singh; Kollo, Lauri; Tarraste, Marek; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss 3D Printing and Additive Manufacturing 2023 / p. 640-649 <https://doi.org/10.1089/3dp.2021.0221> [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 and Debris Evolution in LPBFed Ceramic-Reinforced Steel Composites Under Variable Loads and Temperatures

Maurya, Himanshu Singh; Kumar, Rahul, 1993-; Subramaniyan, Anand Kumar; Tarraste, Marek; Hussain, Abrar; Rahmani Ahranjani, Ramin; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Materials Chemistry and Physics 2025 / art. 131195 <https://doi.org/10.1016/j.matchemphys.2025.131195>

Sliding wear of chromium carbide based cermets under different wear conditions

Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovitš, 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>

Slurry erosion resistance of Cr₃C₂-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

Slurry erosion testing of steel with oil shale ash as abrasive

Priss, Jelena; Klevtsov, Ivan; Juhani, Kristjan; Antonov, Maksim 11th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 16-21, 2012 2012 / p. 300-302 : ill

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. [1] 2010 / p. 456-461 : ill

Spark plasma sintering of WC hardmetals with Fe-based binder [Electronic resource]

Tarraste, Marek; Kübarsepp, Jakob; Juhani, Kristjan; Suurkivi, Taavi; Pirso, Jüri World PM2016 proceedings 2016 / [6] p. : ill. [USB]

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

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

Study of submerged and plasma arc welded composite hardfacings with a novel Cr₃C₂-Ni reinforcement

Bendikiene, Regita; Surženkov, Andrei; Tkachivskyi, Dmytro; Juhani, Kristjan; Viljus, Mart; Traksmaa, 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 [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>

Synthesis of ZrC-TiC blend by novel combination of sol-gel method and carbothermal reduction

Umalas, Madis; Reedo, Valter; Lõhmus, Ants; Hussainova, Irina; Juhani, Kristjan Engineering materials and tribology 2013 / p. 62-67 https://www.researchgate.net/publication/265844548_Synthesis_of_ZrC-TiC_Blend_by_Novel_Combination_of_Sol-Gel_Method_and_Carbothermal_Reduction

TalTechi teadlasele õnnestus valmistada materjal, mida rohepöörde käigus on pikisilmi oodatud

geenius.ee 2024 [TalTechi teadlasele õnnestus valmistada materjal, mida rohepöörde käigus on pikisilmi oodatud](https://digikogu.taltech.ee/et/item/3dad7b12-4a7a-4c9d-8162-30388c52bf5e) <https://digikogu.taltech.ee/et/item/3dad7b12-4a7a-4c9d-8162-30388c52bf5e>

The effect of Cr and C on the characteristics of WC-FeCr hardmetals [Electronic resource]

Tarraste, Marek; Juhani, Kristjan; Kübarsepp, Jakob; Pirso, Jüri; Mikli, Valdek Euro PM2015 Congress & Exhibition : proceedings : 4-7 October 2015, Reims Congress Centre, Reims, France 2015 / [6] p. : ill. [USB]

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.ijrmhm.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 Cr₃C₂ and VC as alloying additives on the microstructure and properties of reactive sintered WC-Co cermets

Juhani, Kristjan; Pirso, Jüri; Viljus, Mart; Letunovičs, 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; Letunovičs, 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 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; Letunovičs, 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 wear resistance tests of cermets and relations between different types of wear

Joost, Renee; Letunovičs, Sergei; Pirso, Jüri; Juhani, Kristjan Proceedings of 14th Nordic Symposium on Tribology : NORDTRIB 2010 : 08.06-11.06.2010, Storforsen, Sweden 2010 / [6] p.: ill. [CD-ROM]

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; Letunovitš, Sergei; Viljus, Mart; Tarraste, Marek 5th World Tribology Congress, WTC 2013 : [proceedings]. Vol. 3 2014 / p. 2084-2087. [CD-ROM]

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 Cr₃C₂-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 Cr₃C₂-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

Wear resistance of HVOF sprayed coatings from mechanically activated thermally synthesized Cr₃C₂-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.einet.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

Verification of new 1000 [degree] C tester designed for investigation of wear-corrosion properties of advanced materials for high temperature applications

Antonov, Maksim; Hussainova, Irina; Kimmari, Eduard; Juhani, Kristjan Proceedings of the 6th International Conference of DAAAM Baltic "Industrial Engineering" : 24-26th April 2008, Tallinn, Estonia. [2] 2008 / p. 395-399 : ill <http://innomet.ttu.ee/daaam08/online/Materials%20Engineering/Antonov.pdf>