

Curriculum Vitae

Ass.Prof. Dipl.-Min. Dr.rer.nat. Daniel Vollprecht,
née Höllen
Montanuniversität Leoben
Chair of Waste Processing Technology and Waste Management (515)
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since 2013	Montanuniversität Leoben, Chair of Waste Processing Technology and Waste Management, Assistant Professor (since 11/2015), Research Associate (until 10/2015), Head of Working Group "Landfills, Contaminated Sites, Slags"
2008 - 2013	Graz University of Technology, Institute of Applied Geoscience, Research Assistant, PhD thesis "Formation and Use of Amorphous Silica"
2003 - 2008	Technische Universität Bergakademie Freiberg, Student of Mineralogy, Specialization Technical Mineralogy
2007 - 2008	Aalborg University, Master Thesis "Identification and Quantification of Crystalline Phases in Thermally Treated Stone Wool"
2006	Canakkale Seramik, Can, Turkey, Trainee in R & D wall tiles
2005	Federal Institute of Earth Sciences and Resources, Hannover, Germany, Trainee in Technical Mineralogy and Sedimentology
2003	Paulsen-Gynasium, Berlin, A-Level

Research interests

Applied Mineralogy: Environmental Mineralogy, Fate of Waste-derived Contaminants in the Environment
Waste Management: Mineral Wastes and By-Products, Contaminated Site Remediation, Landfill Mining

Publications

The EU Training Network for Resource Recovery through Enhanced Landfill Mining—A Review

Vollprecht, D., Machiels, L. & Jones, P. T., 22 Feb 2021, In: Processes : open access journal. 9.2021, 2, p. 1-20 20 p., 394.

Partitioning of heavy metals in different particle-size fractions of soils from former mining and smelting locations in Austria

Jelecevic, A., Sager, M., Vollprecht, D., Puschenreiter, M. & Liebhard, P., 2021, In: Eurasian journal of soil science . 2021 , 10(2), p. 123-131

Influence of material alterations and machine impairment on throughput related sensor-based sorting performance

Küppers, B., Schlögl, S., Friedrich, K., Lederle, L., Pichler, C., Freil, J., Pomberger, R. & Vollprecht, D., 1 Jul 2020, In: Waste management & research. 39.2020, 1, p. 122-129 8 p.

CASE STUDY ON ENHANCED LANDFILL MINING AT MONT-SAINT-GUIBERT LANDFILL IN BELGIUM: PHYSICO-CHEMICAL CHARACTERIZATION AND VALORIZATION POTENTIAL OF COMBUSTIBLES AND INERT FRACTIONS RECOVERED FROM FINE FRACTIONS

Hernández Parrodi, J. C., Vollprecht, D. & Pomberger, R., Jun 2020, In: Detritus. 10, June, p. 44-61 18 p.

CASE STUDY ON ENHANCED LANDFILL MINING AT MONT-SAINT-GUIBERT LANDFILL IN BELGIUM: MECHANICAL PROCESSING, PHYSICO-CHEMICAL AND MINERALOGICAL CHARACTERISATION OF FINE FRACTIONS <4.5 MM

Vollprecht, D., Hernández Parrodi, J. C., Lucas, H. I. & Pomberger, R., Jun 2020, In: Detritus. 10, June, p. 26-43 18 p.

Tailoring the FeO/SiO₂ Ratio in Electric Arc Furnace Slags to Minimize the Leaching of Vanadium and Chromium

Neuhold, S. F., Algermissen, D., Drissen, P., Adamczyk, B., Presoly, P., Sedlazeck, K. P., Schenk, J., Raith, J., Pomberger, R. & Vollprecht, D., 8 Apr 2020, In: Applied Sciences. 10.2020, 7, p. 5249 17 p.

Effects of cement addition and briquetting of rock wool on its geomechanical stability in landfills

Sattler, T. M., Sartori, M., Galler, R., Pomberger, R., Krainz, J., Schimek, J. & Höllen, D., 1 Mar 2020, (E-pub ahead of print) In: Waste management & research. 38.2020, 4, p. 408-414 7 p.

Benchmark analysis for plastic recyclates in Austrian waste management

Friedrich, K., Möllnitz, S., Holzschuster, S., Pomberger, R., Vollprecht, D. & Sarc, R., Mar 2020, In: Detritus. 9, March, p. 105-112 8 p.

Mineral Wool Waste in Austria, Associated Health Aspects and Recycling Options

Sattler, T. M., Pomberger, R., Schimek, J. & Vollprecht, D., Mar 2020, In: Detritus. 9, March, p. 174-180 7 p.

Influence of Throughput Rate and Input Composition on Sensor-Based Sorting Efficiency

Küppers, B., Seidler, I., Koinig, G., Vollprecht, D. & Pomberger, R., 11 Feb 2020, In: Detritus. 9.2020, March, p. 59-67 9 p.

X-ray fluorescence sorting of non-ferrous metal fractions from municipal solid waste incineration bottom ash processing depending on particle surface properties

Pfandl, K., Küppers, B., Scheiber, S., Stockinger, G., Holzer, J., Pomberger, R., Antrekowitsch, H. & Höllen, D., 1 Feb 2020, In: Waste management & research. 38, 2, p. 111 - 121 11 p.

Dense glass-ceramics by fast sinter-crystallization of mixtures of waste-derived glasses

Rabelo Monich, P., Vollprecht, D. & Bernardo, E., 1 Jan 2020, In: International journal of applied ceramic technology. 17, 1, p. 55-63 9 p.

Impact of an in-situ Cr(VI)-contaminated site remediation on the groundwater

Sedlazeck, K. P., Vollprecht, D., Müller, P., Mischitz, R. & Gieré, R., 2020, In: Environmental Science and Pollution Research. 2020

Recovery of Molybdenum, Chromium, Tungsten, Copper, Silver, and Zinc from Industrial Waste Waters Using Zero-Valent Iron and Tailored Beneficiation Processes

Vollprecht, D., Pleschl, K., Neuhold, S. F., Kittinger, F., Öfner, W., Müller, P., Mischitz, R. & Sedlazeck, K. P., 2020, In: Processes : open access journal. 8, p. 279 15 p.

Sequential chemical extraction and mineralogical bonding of metals from Styrian soils

Vollprecht, D., Riegler, C., Ahr, F., Stuhlpfarrer, S. & Wellacher, M., 2020, In: International journal of environmental science and technology : IJEST. 17(8), p. 3663-3676

Investigation of Possible Leaching Control Mechanisms for Chromium and Vanadium in Electric Arc Furnace (EAF) Slags Using Combined Experimental and Modeling Approaches

Neuhold, S. F., van Zomeren, A., Dijkstra, J. J., van der Sloot, H. A., Drissen, P., Algermissen, D., Mudersbach, D., Schüler, S., Griessacher, T., Raith, J., Pomberger, R. & Vollprecht, D., 30 Aug 2019, In: Minerals. 2019, 9, p. 525 544 p.

Influence of surface roughness and surface moisture of plastics on sensor-based sorting in the near infrared range

Küppers, B., Schloegl, S., Oreski, G., Pomberger, R. & Höllen, D., 27 Aug 2019, In: Waste management & research. 2019, 8, p. 843-850 8 p.

Kinetics of lead release from soils at historic mining and smelting sites, determined by a modified electro-ultrafiltration

Jelecevic, A., Horn, D., Eigner, H., Sager, M., Liebhard, P., Moder, K. & Vollprecht, D., 17 Jun 2019, In: Plant, Soil and Environment. 65.2019, 6, p. 298-306 9 p.

Influences and Consequences of Mechanical Delabelling on PET Recycling

Küppers, B., Chen, X., Seidler, I., Friedrich, K., Raulf, K., Pretz, T., Feil, A., Pomberger, R. & Vollprecht, D., 24 May 2019, In: Detritus. 2019, 6, p. 39-46 8 p.

Decomposition of dissolved organic contaminants by combining a boron-doped diamond electrode, zero-valent iron and ultraviolet radiation

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Removal of critical metals from waste water by zero-valent iron

Vollprecht, D., Krois, L-M., Sedlazeck, K. P., Müller, P., Mischitz, R., Olbrich, T. & Pomberger, R., 20 Jan 2019, In: Journal of Cleaner Production. 208.2019, January, p. 1409-1420 12 p.

Ammonium Sorption from Landfill Leachates Using Natural and Modified Zeolites: Pre-Tests for a Novel Application of the Ion Exchanger Loop Stripping Process

Vollprecht, D., Frühauf, S., Stocker, K. & Ellersdorfer, M., 2019, In: Minerals. 2019, 9, p. 471

CASE STUDY ON ENHANCED LANDFILL MINING AT MONT-SAINTGUIBERT LANDFILL IN BELGIUM: CHARACTERIZATION AND POTENTIAL OF FINE FRACTIONS

Hernández Parrodi, J. C., García Lopez, C., Küppers, B., Raulf, K., Vollprecht, D., Pretz, T. & Pomberger, R., 2019, In: Detritus. 8, p. 47 - 61

CASE STUDY ON ENHANCED LANDFILL MINING AT MONT-SAINTGUIBERT LANDFILL IN BELGIUM: MECHANICAL PROCESSING OF FINE FRACTIONS FOR MATERIAL AND ENERGY RECOVERY

Hernández Parrodi, J. C., Raulf, K., Vollprecht, D., Pretz, T. & Pomberger, R., 2019, In: Detritus. 8, p. 62 - 78

INTEGRATION OF RESOURCE RECOVERY INTO CURRENT WASTE MANAGEMENT THROUGH (ENHANCED) LANDFILL MINING

Hernández Parrodi, J. C., Lucas, H. I., Gigantino, M., Sauve, G., Esguerra, J. L., Einhüpl, P., Vollprecht, D., Pomberger, R., Friedrich, B., van Acker, K., Krook, J., Svensson, N. & Van Passel, S., 2019, In: Detritus. p. 141 - 156

Mineralogy and Leachability of Natural Rocks—A Comparison to Electric Arc Furnace Slags

Vollprecht, D., Berger, M., Altenburger-Junker, I., Neuhold, S. F., Sedlazeck, K. P., Aldrian, A., Dijkstra, J. J., van Zomeren, A. & Raith, J., 2019, In: Minerals. 2019, 9, p. 501

QUALITY ASSESSMENT OF NONFERROUS METALS RECOVERED BY MEANS OF LANDFILL MINING: A CASE STUDY IN BELGIUM

Lucas, H. I., García Lopez, C., Hernández Parrodi, J. C., Vollprecht, D., Raulf, K., Pomberger, R., Pretz, T. & Friedrich, B., 2019, In: Detritus. 8, p. 79 - 90

RELATING MAGNETIC PROPERTIES OF MUNICIPAL SOLID WASTE CONSTITUENTS TO IRON CONTENT – IMPLICATIONS FOR ENHANCED LANDFILL MINING

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Mineralogy and leachability of V, Cr, Cu, Mo, Ni and F from natural rocks: six examples from Austria

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Porous glass-ceramics from alkali activation and sinter-crystallization of mixtures of waste glass and residues from plasma processing of municipal solid waste

Rabelo Monich, P., Rincón Romero, A., Höllen, D. & Bernardo, E., 2018, In: Journal of Cleaner Production. 188, p. 871 - 878 p.

Potential and main technological challenges for material and energy recovery from fine fractions of landfill mining: A critical review

Hernandez Parrodi, J. C., Höllen, D. & Pomberger, R., 2018, In: Detritus. 3, september 2018, p. 19-29 10 p.

Stepwise treatment of ashes and slags by dissolution, precipitation of iron phases and carbonate precipitation for production of raw materials for industrial applications

Höllén, D., Berneder, I., Capo Tous, F., Stöllner, M., Sedlazeck, K. P., Schwarz, T., Aldrian, A. & Lehner, M., 2018, In: Waste management. 78, p. 750 - 762

Mineralogical and geochemical characterization of a chromium contamination in an aquifer - A combined analytical and modeling approach

Sedlazeck, K. P., Höllen, D., Müller, P., Mischitz, R. & Gieré, R., 2017, In: Applied Geochemistry. p. 44 - 56

Synthesis of hierarchically structured materials: microporous diatoms and nanoporous hydroxyaluminosilicate

Höllén, D., Klammer, D., Letofsky-Papst, I., Raab, G. & Dietzel, M., 2016, In: Nanotechnology for Environmental Engineering. 1, 9, p. 1 12 p.

Influence of chromium containing spinels in an electric arc furnace slag on the leaching behaviour

Aldrian, A., Raith, J., Höllen, D. & Pomberger, R., Dec 2015, In: The Journal of Solid Waste Technology and Management. 41, 4, p. 357-365

Landfill mining: Development of a theoretical method for a preliminary estimate of the raw material potential of landfill sites

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Landfill mining: Resource potential of Austrian landfills – Evaluation and quality assessment of recovered municipal solid waste by chemical analyses

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The effect of Al on Si isotope fractionation investigated by silica precipitation experiments

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Treimer, R., Niesenbacher, I. & Höllen, D., 2014.

Si stable isotope fractionation during adsorption and the competition between kinetic and equilibrium isotope fractionation: Implications for weathering systems

Oelze, M., von Blanckenburg, F., Höllen, D., Dietzel, M. & Bouchez, J., 2014, In: Chemical geology. 380, p. 161-171

Umwelttechnische Aspekte des Einsatzes von Schlacken als Versatz im Bergbau.

Höllén, D., Galler, R., Eisenberger, M. & Pomberger, R., 2014, In: Mining Report. 150, p. 137-141

Zur Fragestellung des Einsatzes von Schlacken als Versatz im Bergbau

Höllén, D., Pomberger, R., Eisenberger, M. & Galler, R., 2014, In: Berg- und hüttenmännische Monatshefte : BHM. 159, p. 465-469

Mineralogy and leachability of iron and steel work slags

Höllén, D., Schubernig, M., Aldrian, A., Czyzykiewicz, P., Sarc, R., Pomberger, R. & Raith, J., 2013, In: Mitteilungen der Österreichischen Mineralogischen Gesellschaft. 159, p. 67-67

Tailoring of a Hierarchically Structured Material from Diatomite

Höllén, D., Klammer, D., Letofsky-Papst, I. & Dietzel, M., 2013.

Tailoring of a Hierarchically Structured Material from Diatomite

Höllén, D., Klammer, D., Letofsky-Papst, I. & Dietzel, M., 2013, In: Mitteilungen der Österreichischen Mineralogischen Gesellschaft. 159, p. 66-66

Hydrothermal Alteration of Diatomite for Removal of Aqueous Cu²⁺, Pb²⁺ and Zn²⁺

Höllen, D., Klammer, D., Letofsky-Papst, I. & Dietzel, M., 2012, In: Materials science and engineering B (Solid-state materials for advanced technology). 10, p. 523-533