

**Aqueous mineral carbonation of oil shale mine waste (limestone) : a feasibility study to develop a CO<sub>2</sub> capture sorbent**  
Puthiya Veetil, Sanoop Kumar; Rebane, Kaarel; Yörük, Can Rüstü; Lopp, Margus; Trikkel, Andres; Hitch, Michael William  
Energy 2021 / art. 119895 <https://doi.org/10.1016/j.energy.2021.119895> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Aqueous mineral carbonation of ultramafic material : a pre-requisite to integrate into mineral extraction and tailings management operation**  
Veetil, Sanoop Kumar Puthiya; Hitch, Michael William Environmental science and pollution research 2021 / p. 29096–29109 : ill <https://doi.org/10.1007/s11356-021-12481-0> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Carbon prices for meeting the Paris agreement and their impact on key metals**  
Tost, Michael; Hitch, Michael William; Lutter, Stephan; Feiel, Susanne; Moser, Peter The extractive industries and society 2020 / p. 593-599 <https://doi.org/10.1016/j.exis.2020.01.012> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Carbonation of steel slag and gypsum for building materials and associated reaction mechanisms**  
Wang, Xue; Ni, Wen; Li, Jiajie; Zhang, Siqi; Hitch, Michael William; Pascual, Rodrigo Cement and Concrete Research 2019 / art. 105893, 12 p. : ill <https://doi.org/10.1016/j.cemconres.2019.105893> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Coal slurry pipelines : a coal transportation method in Kalimantan, Indonesia**  
Jati, Humaira A.; Monei, Nthati Lilian; Barakos, George; Tost, Michael; Hitch, Michael William International journal of mining, reclamation and environment 2021 / p. 638-655 <https://doi.org/10.1080/17480930.2021.1949857> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Correlation between COVID-19 cases and gold price fluctuation**  
Gautam, Roshan; Kim, Yoochan; Topal, Erkan; Hitch, Michael William International journal of mining, reclamation and environment 2022 / p. 574-586 <https://doi.org/10.1080/17480930.2022.2077542>

**Determining the embedding parameters governing long-term dynamics of copper prices**  
Cortez, Carlos A. Tapia; Hitch, Michael William; Sammut, Claude Chaos, solitons and fractals 2018 / p. 186-197 : ill <http://dx.doi.org/10.1016/j.chaos.2018.03.032>

**Development of a smart computational tool for the evaluation of co- and by-products in mining projects using Chovdar gold ore deposit in Azerbaijan as a case study**  
Mammadli, Anvar; Barokos, George; Islam, Md Ariful; Mischo, Helmut; Hitch, Michael William Mining 2022 / p. 487-510 : ill <https://doi.org/10.3390/mining2030026>

**Direct aqueous carbonation on olivine at a CO<sub>2</sub> partial pressure of 6.5 MPa**  
Li, Jiajie; Jacobs, Anthony D.; Hitch, Michael William Energy 2019 / p. 902-910 : ill <https://doi.org/10.1016/j.energy.2019.02.125> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Ecosystem services costs of metal mining and pressures on biomes**  
Tost, Michael; Murguia, Diego; Hitch, Michael William; Lutter, Stephan; Luckeneder, Sebastian; Feiel, Susanne; Moser, Peter Extractive industries and society 2020 / p. 79-86 : ill <https://doi.org/10.1016/j.exis.2019.11.013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Eesti tulevik ja säästlik mineraalikasutus**  
Hitch, Michael William Mente et Manu 2019 / lk. 4-9 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est) [https://www.ttu.ee/public/m/mente-et-manu/MM\\_04\\_2019/mobile/index.html](https://www.ttu.ee/public/m/mente-et-manu/MM_04_2019/mobile/index.html) [https://artiklid.elnet.ee/record=b2878198\\*est](https://artiklid.elnet.ee/record=b2878198*est)

**Eesti tulevik ja säästlik mineraalikasutus**  
Hitch, Michael William Sirp 2019 / lk. 32-34 : fot [https://www.ester.ee/record=b1072938\\*est](https://www.ester.ee/record=b1072938*est) <https://sirp.ee/s1-artiklid/c21-teadus/eesti-tulevik-ja-saastlik-mineraalikasutus/>

**Effect of calcium to silicon ratio on the microstructure of hydrated calcium silicate gels prepared under medium alkalinity**  
Ba, Haojing; Li, Jiajie; Ni, Wen; Li, Ying; Ju, Yongjian; Zhao, Ben; Wen, Guoping; Hitch, Michael William Construction and building materials 2023 / art. 131240, 11 p.: ill <https://doi.org/10.1016/j.conbuildmat.2023.131240>

**Effect of substrate properties and phosphorus supply on facilitating the uptake of rare earth elements (REE) in mixed culture cropping systems of Hordeum vulgare, Lupinus albus and Lupinus angustifolius**  
Monei, Nthati Lilian; Hitch, Michael William; Heim, Juliane; Pourret, Olivier; Heilmeier, Hermann; Wiche, Oliver Environmental science and pollution research 2022 / p. 57172-57189 <https://doi.org/10.1007/s11356-022-19775-x> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Effects of Carbon tax on urban Carbon Emission reduction : evidence in China environmental governance**  
Zhao, Aiwen; Song, Xiaoqian; Li, Jiajie; Yuan, Qingchun; Pei, Yingshun; Li, Ruilin; Hitch, Michael William International journal of

environmental research and public health 2023 / art. 2289, 19 p. : ill <https://doi.org/10.3390/ijerph20032289>

### **Environmental, social and governance (ESG) risk, uncertainty, and the mining life cycle**

Maybee, Bryan; Lilford, Eric; **Hitch, Michael William** Extractive Industries and Society 2023 / art. 101244  
<https://doi.org/10.1016/j.exis.2023.101244>

### **European mining and the social license to operate**

Lesser, Pamela; Gugerell, Katharina; Poelzer, Gregory; **Hitch, Michael William**; Tost, Michael The Extractive industries and society 2020 / art. 787, 8 p <https://doi.org/10.1016/j.exis.2020.07.021> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Europe's mining innovation trends and their contribution to the sustainable development goals : Blind spots and strong points**

Endl, Andreas; Tost, Michael; **Hitch, Michael William**; Moser, Peter; Feiel, Susanne Resources policy 2021 / art. 101440, 11 p. : tab  
<https://doi.org/10.1016/j.resourpol.2019.101440> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Evaluating the potential of Estonia as European REE recycling capital via an environmental social governance risks assessment model**

**Paat, Andrus; Veetil, Sanoop Kumar Puthiya; Karu, Veiko; Hitch, Michael William** The Extractive industries and society 2021 / art. 100767, 8 p <https://doi.org/10.1016/j.exis.2020.07.001> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Evaluation of impact of potential extreme rainfall events on mining in Peru**

Gonzalez, Francisco R.; Raval, Simit; Taplin, Ros; Timms, Wendy; **Hitch, Michael William** Natural Resources Research 2019 / p. 393–408 : ill <http://dx.doi.org/10.1007/s11053-018-9396-1>

### **Fuzzy analytical hierarchy process based environmental, social and governance risks assessment for the future phosphorite mining in Estonia**

**Paat, Andrus; Majak, Jüri; Karu, Veiko; Hitch, Michael William** Extractive Industries and Society 2024 / art. 101438  
<https://doi.org/10.1016/j.exis.2024.101438> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **How can sustainable public transport be improved? A traffic sign recognition approach using convolutional neural network**

Liu, Jingjing; Ge, Hongwei; Li, Jiajie; He, Pengcheng; Hao, Zhangang; **Hitch, Michael William** Energies 2022 / art. 7386, 14 p. : ill  
<https://doi.org/10.3390/en15197386>

### **Important environmental social governance risks in potential phosphorite mining in Estonia**

**Paat, Andrus; Roosalu, Triin; Karu, Veiko; Hitch, Michael William** The Extractive Industries and Society 2021 / art. 100911  
<https://doi.org/10.1016/j.exis.2021.100911> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Integrated Mineral Carbonation of Ultramafic Mine Deposits - A Review**

Li, Jiajie; **Hitch, Michael William**; Power, Ian M.; Pan, Yueyi Minerals 2018 / art. 147, 18 p. : ill <http://dx.doi.org/10.3390/min8040147>

### **Integration of sustainability in mining engineering education**

Binder, Angela; Langefeld, Oliver; **Hitch, Michael William** Mining Report Glückauf 2018 / p. 435–441 : ill <https://mining-report.de/online-kiosk/mining-report-glueckauf-ausgabe-5-oktober-2018/>

### **Market stakeholder analysis of the practical implementation of carbonation curing on steel slag for urban sustainable governance**

Li, Jiajie; Wang, Chenyu; Song, Xiaoqian; Jin, Xin; Zhao, Shaowei; Qi, Zihan; Zeng, Hui; Zhu, Sitao; Jiang, Fuxing; Ni, Wen; **Hitch, Michael William** Energies 2022 / art. 2399, 19 p. : ill <https://doi.org/10.3390/en15072399>

### **MCDM applied to the evaluation of transitional and post-mining conditions - an innovative perspective developed through the EIT ReviRIS project**

Amaro, Sandra Lourenco; Barbosa, Sofia; Ammerer, Gloria; Bruno, Aina; Guimera, Jordi; Orfanoudakis, Ioannis; Ostrega, Anna; Mylona, Evangelia; **Hitch, Michael William; Strydom, Jessica** Materials Proceedings 2021 / art. 22  
<https://doi.org/10.3390/materproc2021005022>

### **Mechanical activation of magnesium silicates for mineral carbonation, a review**

Li, Jiajie; **Hitch, Michael William** Minerals engineering 2018 / p. 69–83 : ill <https://doi.org/10.1016/j.mineng.2018.08.034> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Mechanical activation of medium basicity steel slag under dry condition for carbonation curing**

Li, Jiajie; Ni, Wen; Wang, Xue; Zhu, Sitao; Wei, Xinlei; Jiang, Fuxing; Zeng, Hui; **Hitch, Michael William** Journal of building engineering 2022 / art. 104123 <https://doi.org/10.1016/j.job.2022.104123>

## **Metal mining's environmental pressures: a review and updated estimates on CO2 emissions, water use, and land requirements**

**Hitch, Michael William**; Tost, Michael; Bayer, Benjamin Sustainability 2018 / art. 2881 ; 14 p. : tab <https://doi.org/10.3390/su10082881>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Miners and mendicants : a cautionary tale**

Lytle, Murray; **Hitch, Michael William** The Extractive industries and society 2019 / p. 498-503 : tab <https://doi.org/10.1016/j.exis.2019.02.005> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Mixed cultures, a sustainable way to accelerate phytomining of rare earth elements, is there a future here?**

**Monei, Nthathi Lilian**; Wiche, Oliver; **Hitch, Michael William**; Heilmeier, Hermann EGU General Assembly 2021 2021 / art. EGU21-13690 <https://doi.org/10.5194/egusphere-egu21-13690>

## **Multi-criteria decision analysis for evaluating transitional and post-mining options - an innovative perspective from the EIT ReviRIS Project**

Amaro, Sandra Lourenco; Barbosa, Sofia; Ammerer, Gloria; Bruno, Aina; Guimera, Jordi; Orfanoudakis, Ioannis; Ostrega, Anna; Mylona, Evangelia; Strydom, Jessica; **Hitch, Michael William** Sustainability 2022 / art. 2292, 13 p. : ill <https://doi.org/10.3390/su14042292> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Orthogonal test design for the optimization of preparation of steel slag-based carbonated building materials with ultramafic tailings as fine aggregates**

Li, Jiajie; Wang, Chengzhou; Ni, Wen; Zhu, Sitao; Mao, Shilong; Jiang, Fuxing; Zeng, Hui; Sun, Xikui; Huang, Bingxiang; **Hitch, Michael William** Minerals 2022 / art. 246, 19 p. : ill <https://doi.org/10.3390/min12020246>

## **Phytomining of rare earth elements : dynamics of rhizosphere processes and element interactions in the soil = Haruldaste muldmetallide fütokaevandamine : risosfääri protsesside ja geokeemiliste protsesside dünaamika pinnases**

**Monei, Nthathi Lilian** 2023 <https://doi.org/10.23658/taltech.65/2023> <https://digikogu.taltech.ee/et/Item/ae5a3629-d857-411e-86d5-9778767e7f64> [https://www.ester.ee/record=b5567493\\*est](https://www.ester.ee/record=b5567493*est)

## **Professor Hitch: mulle meeldib, kui õpilaste silmad löövad loengus särama : [intervjuu]**

**Hitch, Michael William** Director. Inseneria 2019 / lk. 64-69 : fot [http://www.ester.ee/record=b2336521\\*est](http://www.ester.ee/record=b2336521*est)  
<https://director.ee/2019/05/02/professor-hitch-mulle-meeldib-kui-opilaste-silmad-loovad-loengus-sarama/?v=a57b8491d1d8>

## **Recent developments and challenges of aqueous mineral carbonation : a review**

**Veetil, Sanoop Kumar Puthiya**; **Hitch, Michael William** International journal of environmental science and technology 2020 / p. 4359-4380 <https://doi.org/10.1007/s13762-020-02776-z> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Reducing mining footprint by matching haul fleet demand and route-oriented tire types**

Pascual, Rodrigo; Roman, M.; **Hitch, Michael William** Journal of cleaner production 2019 / p. 645-651  
<https://doi.org/10.1016/j.jclepro.2019.04.069> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Relationships between essential and non-essential elements in plants with different nutritional strategies and silicon absorption capacities : [manuscript]**

**Monei, Nthathi Lilian**; Benyr, V.; Heilmeier, Hermann; **Hitch, Michael William**; Wiche, Oliver The international journal of environment & health 2023

## **Responsible sourcing for energy transitions : discussing academic narratives of responsible sourcing through the lens of natural resources justice**

Kügerl, Marie-Theres; **Hitch, Michael William**; Gugerell, Katharina Journal of environmental management 2023 / p. 116711, 15 p. : ill <https://doi.org/10.1016/j.jenvman.2022.116711>

## **Selective removal of selenium by phytoremediation from post mining coal wastes : practicality and implications : [abstrac]**

**Monei, Nthathi Lilian**; **Veetil, Sanoop Kumar Puthiya**; **Hitch, Michael William**; Gao, Jeffrey Geophysical research abstracts 2020 / EGU2020-16117, 1 p <https://doi.org/10.5194/egusphere-egu2020-16117>

## **Selective removal of selenium by phytoremediation from post/mining coal wastes : practicality and implications**

**Monei, Nthathi Lilian**; **Veetil, Sanoop Kumar Puthiya**; Gao, Jeffrey; **Hitch, Michael William** International journal of mining, reclamation and environment 2021 / p. 69-77 : ill <https://doi.org/10.1080/17480930.2020.1801118> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Social licence : power imbalances and levels of consciousness – two case studies**

**Hitch, Michael William**; Lytle, Murray; Tost, Michael International journal of mining, reclamation and environment 2020 / p. 238-246  
<https://doi.org/10.1080/17480930.2018.1530582> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Study on dynamic disaster mechanisms of thick hard roof induced by hydraulic fracturing in surface vertical well**  
Shang, X; Zhu, Sitao; Jiang, Fuxing; Liu, Jinhai; Li, Jiajie; **Hitch, Michael William**; Liu, Hongliang; Tang, Shibin; Zhu, Chun Minerals  
2022 / art. 1537, 22 p. : ill <https://doi.org/10.3390/min12121537>

**The effect of mineral composition on direct aqueous carbonation of ultramafic mine waste rock for CO<sub>2</sub> sequestration, a case study of Turnagain ultramafic complex in British Columbia, Canada**  
Li, Jiajie; Jacobs, Anthony D.; **Hitch, Michael William** International journal of mining, reclamation and environment 2022 / p. 267-286  
<https://doi.org/10.1080/17480930.2022.2041340>

**The license to mine : making resource wealth work for those who need it most**  
Hagan, Andrew J.; Tost, Michael; Inderwildi, Oliver R.; **Hitch, Michael William**; Moser, Peter Resources policy 2021 / art. 101418  
<https://doi.org/10.1016/j.resourpol.2019.101418> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**The long uphill journey of Australia's rare earth element industry : challenges and opportunities**  
Barakos, George; Dyer, Laurence; **Hitch, Michael William** International journal of mining, reclamation and environment 2022 / p. 651-670  
<https://doi.org/10.1080/17480930.2022.2127248> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**The state of environmental sustainability considerations in mining**  
Tost, Michael; **Hitch, Michael William**; Chandurkar, Vighnesh; Moser, Peter; Feiel, Susanne Journal of cleaner production 2018 / p. 969-977 : ill <http://dx.doi.org/10.1016/j.jclepro.2018.02.051>

#### **Uued inimesed TalTechis**

**Lukas, Mati; Joala, Epp; Scheler, Ott; Jõulu, Janno; Smolander, Olli-Pekka; Hitch, Michael William; Prashanth, Konda Gokuldoss; Masso, Anu; Sinisalu, Algi** *Mente et Manu* 2018 / lk. 42-47 : portr [http://www.ester.ee/record=b1242496\\*est](http://www.ester.ee/record=b1242496*est)  
<http://dea.digar.ee/publication/AKmenteetmanu> <https://taltech.ee/avalehekulg/?id=10641&category=128006#newsTabsMenu>  
[https://artiklid.elnet.ee/record=b2866975\\*est](https://artiklid.elnet.ee/record=b2866975*est)

**Virtuous natural resource development : the evolution and adaptation of social licence in the mining sector**  
**Hitch, Michael William**; Barakos, George *The Extractive industries and society* 2021 / art. 100902  
<https://doi.org/10.1016/j.exis.2021.100902>