

Workshop Ni-Co-Sc

Preliminary programme -overview of the early received contributions, and Key notes

October 17

M. Cathelineau : *Welcome address*

Ressources 21 and the research projects on Nickel and associated elements at Lorraine University - The objectives of the workshop

General overview of needs in the scientific and industrial fields

F. Bailly-(CRNT director, Noumea, New Caledonia) - *The CNRT "Nickel" in New Caledonia : Shared vision and transverse programmes from mining to natural and human environment*

M. LeGleuher (BRGM, Orleans France) : *Ni market overview*

Ore formation- Ni in saprolites

C. Villanova (Barcelona Univ.)—**key note:** *The variety of Ni-bearing phyllosilicate ores in the Ni-laterites from the Dominican Republic: a multiscale approach.*

F. Martin- *Ni, and Co : important cations for crystal chemistry mechanisms and industrial applications.*

M. Cathelineau et al- *The multistage formation of Ni-enrichment in New Caledonia deposits*

N. Maubec et al.- *Mineralogical and cristallochemical characterizations of Ni-bearing clays*

JM Génin et al.- *Green rust related FeII-III to tactical minerals in hydromorphic soils (aquifers and maritime marshes) and the search of their homologous Ni minerals*

E. Tourneur and A. Chauvet- *The Co-Ni Arsenides ore of Bou Azzer, Morocco: respective role of Hydrothermal and Structural control on their mode of formation? Preliminary results from combined structural, microtectonics, textural and mineralogical studies.(Poster)*

Ni in laterites

R. Herrington (NHM, London)-**key note:** *Palaeo Ni-Co-Sc laterites of Europe: diversity, formation and future potential*

B. Quesnel- *The Ni redistribution in laterites : effects of geomorphology and lateral transfer in the formation of Ni-enrichments in the saprolite*

A. Miagkyi et al.: *Subsurface Reactive Transport Modelling of the Lateritic Ni mineralization in New Caledonia: A coupled Thermo-Hydro-Geochemical approach*

E. Ramanaidou (Csiro, Perth, Australia)-**key note:** *Ni-goethites in nickel laterites*

C. Duée et al. - *Highlighting of nickel using the hyperspectral signal of minerals originating from New Caledonia lateritic profiles*

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Scandium : a hidden resource ?

J-P Ambrosi (Cerege, France)-**key note:** *Main lateritic ore types and Ni-Sc speciation*

M. Ulrich: *LA-ICP-MS analysis of Scandium: calibration, and application to in situ analysis of Sc in silicates and oxides*

Y. Teitler: *Behaviour of scandium from source rocks to laterites*

J. Cauzid : *In situ analyses of Ni-Sc (Ti, V,...) using XRF*

M. Munoz, M. Ulrich: *Speciation of Ni and Sc in laterite profile : a synchrotron approach*

Social acceptance and mining

J. Merlin- *Science and society relationships in the New Caledonian nickel policy*

- M. Kowasch- *Socio- Economic impacts and local involvement in the Konimabo Porject in northern New Caledonia*
- C. Levacher (to be confirmed) *Extracting, measuring, tramming, loading the nickel. Importance of technic and skills in identities and relations between small and medium mining extraction companies in New Caledonia*

Ore Processing

- S. Farrokhpay- (UL and UQ, Australia)- key note:** *Processing of fine grained lateritic ores : new challenges*
- S. Blancher- *Mineral quantification in nickel laterite by Mineralogic: breakthrough in statistical EDS analyses*

W. Hawker (Faculty of Engineering UQ, Australia)-key note : *The extractive metallurgy of agromined nickel*

- M.O. Simmonot and JB Lauby- *Processing of ashes issued from hyperaccumulator ashes*
- A. Chagnes- *Modelling of liquid-liquid extraction of cobalt, nickel and manganese from acidic chloride media.*

Phytomining-Agromining

- A. van der Ent (UQ) - *Discovery of tropical hyperaccumulators in New Caledonia and Malaysia, and advancing the development of practical tropical agromining*
- G. Echevarria: *Pedogenesis of ultramafic soils and biogeochemistry of nickel: ecological implications in Kinabalu Park (Malaysia)*
- E. Auber - *Pioneer Casuarinacae from Bornean serpentines: potential tools for soil restauration*
- E. Roccotiello et al. - *Metals accumulation by fungi and plants in a Mediterranean sulphide mine*
- P. Marescotti- *Plants and fungi in Ni-, and Cr-rich serpentine soil from Voltri Massif (Liguria, Italy)*
- C. Quintela-Sabaris *Improving Ni-agromining with Mediterranean hyperaccumulators: the role of fertilisation and co-cropping with legumes(poster)*

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Ni geochemical cycle

- Cécile Quantin (Paris Sud)-key note :** *Ni Isotopic fractionation in the surficial cycle of nickel*
- I. Zelano, C.Cloquet (CRPG, Nancy): *Biogeochemical cycle of Ni and its impact on Ni-hyperaccumulators*

Ecotoxicology and environment

- C. E. Schlekat (NiPERA, Durham, USA)-key note:** *The mechanisms of nickel toxicity in aquatic environments*
- S. Lopez, et G. Echevarria (LSE, Nancy, France): *The bacterial community diversity in the rhizosphere of Ni-hyperaccumulator plants growing in Halmahera Island*
- L. Minguez et al. (LIEC): *An integrated approach to the ecotoxicity assessment of nickel and other metals in aquatic organisms: A case study at Lake Ohrid (Albania)*

Remediation programmes

- Fabrice Colin (IRD scientific Vice-director)-key note:** *Ecosystems and mining activity in New Caledonia: impact, remediation et co-valorisation of the biodiversity*
- C. Quintela-Sabaris et al.: *Evaluation of soil decompaction and amendment with organic wastes on the revegetation of serpentine technosols: a mesocosm study*

