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“ΠΜΣ Επιστήμες Γης και Περιβάλλον”

*Ειδίκευση "Ορυκτοί Πόροι - Πετρολογία και Διαχείριση Περιβάλλοντος"*

**"ΟΠΠ-Ε08 ΜΕΘΟΔΟΛΟΓΙΑ ΕΡΕΥΝΑΣ ΚΑΙ ΣΥΝΤΑΞΗ ΕΠΙΣΤΗΜΟΝΙΚΩΝ  
ΚΕΙΜΕΝΩΝ"**

*Essay*

Designed to familiarise you with peer review, literature citation and research activity and is divided into two parts.

***Part A: "Peer review and literature citation"***

In the first part describe why peer review and citation is so important to the scientific method and describe the mechanisms and key criteria by which a scientific paper is typically assessed by reviewers. A good source of information in addition to formal publications on this subject would be to examine the up to date authors and reviewers instructions for different academic reviews.

FOR EXAMPLE:

INSTRUCTIONS TO REVIEWERS: <https://www.cambridge.org/core/journals/business-ethics-quarterly/information/instructions-for-reviewers>

INSTRUCTIONS TO AUTHORS: <https://www.mdpi.com/journal/minerals/instructions>

***Part B: "Research activity and Critical Thinking"***

In the second part choose scientific papers published by a member of your course's staff, and choose a theme that **is of interest to yourself**. These papers should be in the same research area with papers preceding and citing the others. Ideally the more recently published should be within the last 36 months. Briefly describe the research covered by these papers, how they are linked scientifically to each other (e.g. by a progression of ideas and experiments, by contradictory data, or, by a new research direction) and what impact they individually or collectively have had on the wider literature. Also identify any evidence of critical thinking within the manuscripts i.e. inference, interpretation, deduction, assumptions, evaluation.

ΝΑ ΕΠΙΛΕΞΕΤΕ ΕΝΑ ΑΠΟ ΤΑ “Α”, “Β”

## Literature

### (A) The Cape Vani Mn oxide deposit

1. *Liakopoulos, A.; Glasby, G.P.; Papavassiliou, C.T.; Boulegue, J.* Nature and origin of the Vani manganese deposit, Milos, Greece: An overview. *Ore Geol. Rev.* **2001**, 18, 181–209.
2. *Kilias, S.P.* Microbial Mat–Related Structures in the Quaternary Cape Vani Manganese-Oxide (-Barite) Deposit, NW Milos Island, Greece. In *Microbial Mats in Siliciclastic Depositional Systems through Time*; SEPM Special Publication: Tulsa, OK, USA, **2012**; Volume 101, pp. 97–110.
3. *Kilias, S.P.; Ivarsson, M.; Chi Fru, E.; Rattray, J.E.; Gustafsson, H.; Naden, J.; Detsi, K.* Precipitation of Mn Oxides in Quaternary Microbially Induced Sedimentary Structures (MISS), Cape Vani Paleo-Hydrothermal Vent Field, Milos, Greece. *Minerals* **2020**, 10, 536. <https://doi.org/10.3390/min10060536> [<https://www.mdpi.com/2075-163X/10/6/536>]

### (B) The Cape Vani Banded Iron Formation (BIF) deposit

1. *Bekker, A., Slack, J. F., Planavsky, N., Krapež B., Hofmann, A., Konhauser, K. O., and Rouxel, O. J.*: Iron formation: The sedimentary product of a complex interplay among mantle, tectonic, oceanic, and biospheric processes, *Econ. Geol.*, 105, 467–508, **2010**.
2. *Chi Fru, E., Ivarsson, M., Kilias, S. P., Bengtson, S., Belivanova, V., Marone, F., Fortin, D., Broman, C., and Stampanoni, M.*: Fossilized iron bacteria reveal a pathway to the origin banded iron formations, *Nature Communications*, 4, 2050, <https://doi.org/10.1038/ncomms3050>, **2013**.
3. *Chi Fru, E., Kilias, S., Ivarsson, M., Rattray, J.E., Gkika, K., McDonald, I., He, Q. and Broman, C., 2018.* Sedimentary mechanisms of a modern banded iron formation on Milos Island, Greece. *Solid Earth*, 9, 573–598, <https://doi.org/10.5194/se-9-573-2018>

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