Zotero:
automatic bibliography within WYSIWYG editors

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Citation example

…

I shall add a citation after this sentence [1].

...

References

[1]. V. Bachler, G. Olbrich, F. Neese, K. Wieghardt, *Inorg. Chem.* **2002**, *41*, 4179–4193.

“BibTeX-style” bibliography

- Automatic generation of the citation text according to the pattern, *e.g.*:
  - V. Bachler, G. Olbrich, F. Neese, K. Wieghardt, *Inorg. Chem.* **2002**, *41*, 4179–4193.

    or:
  - Bachler, V., Olbrich, G., Neese, F. & Wieghardt, K. Theoretical Evidence for the Singlet Diradical Character of Square Planar Nickel Complexes Containing Two *o*-Semiquinonato Type Ligands. *Inorg. Chem.* **41,** 4179–4193 (2002).
- Automatic reordering and renumbering of the citations due to the order of their first appearence in the text.

Problem:

how to get the same features in WYSIWYG Offices?

Related problems: organizing the collection

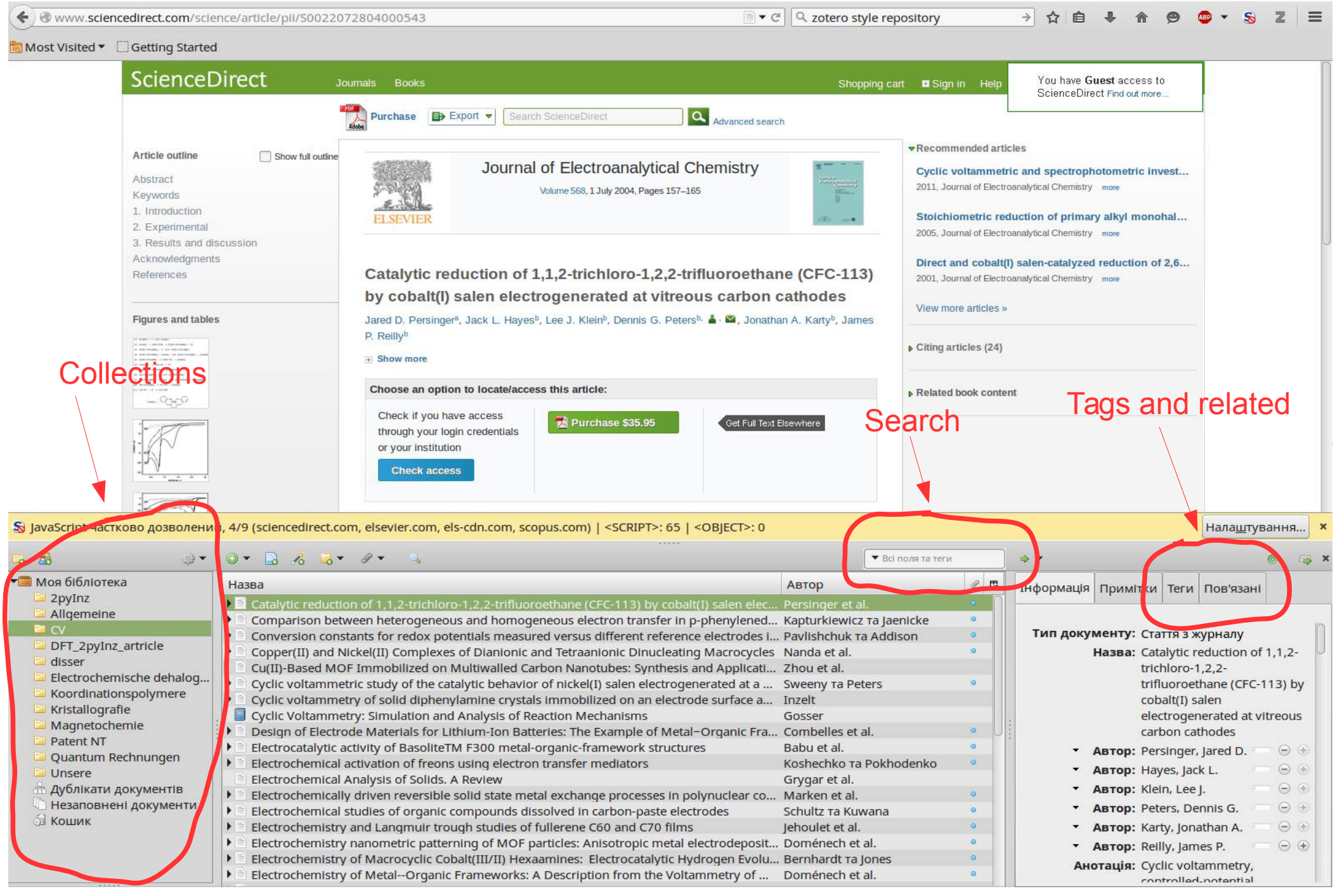
- Manual formation of BibTeX items — slow and annoying.
- Scientific journals — usually have an interface to export citation as a single BibTeX reference in text file.
- How about:
  - One-click?
  - Addition by DOI?
  - By PMID?
  - By ISBN?
  - Synchronization?

Zotero

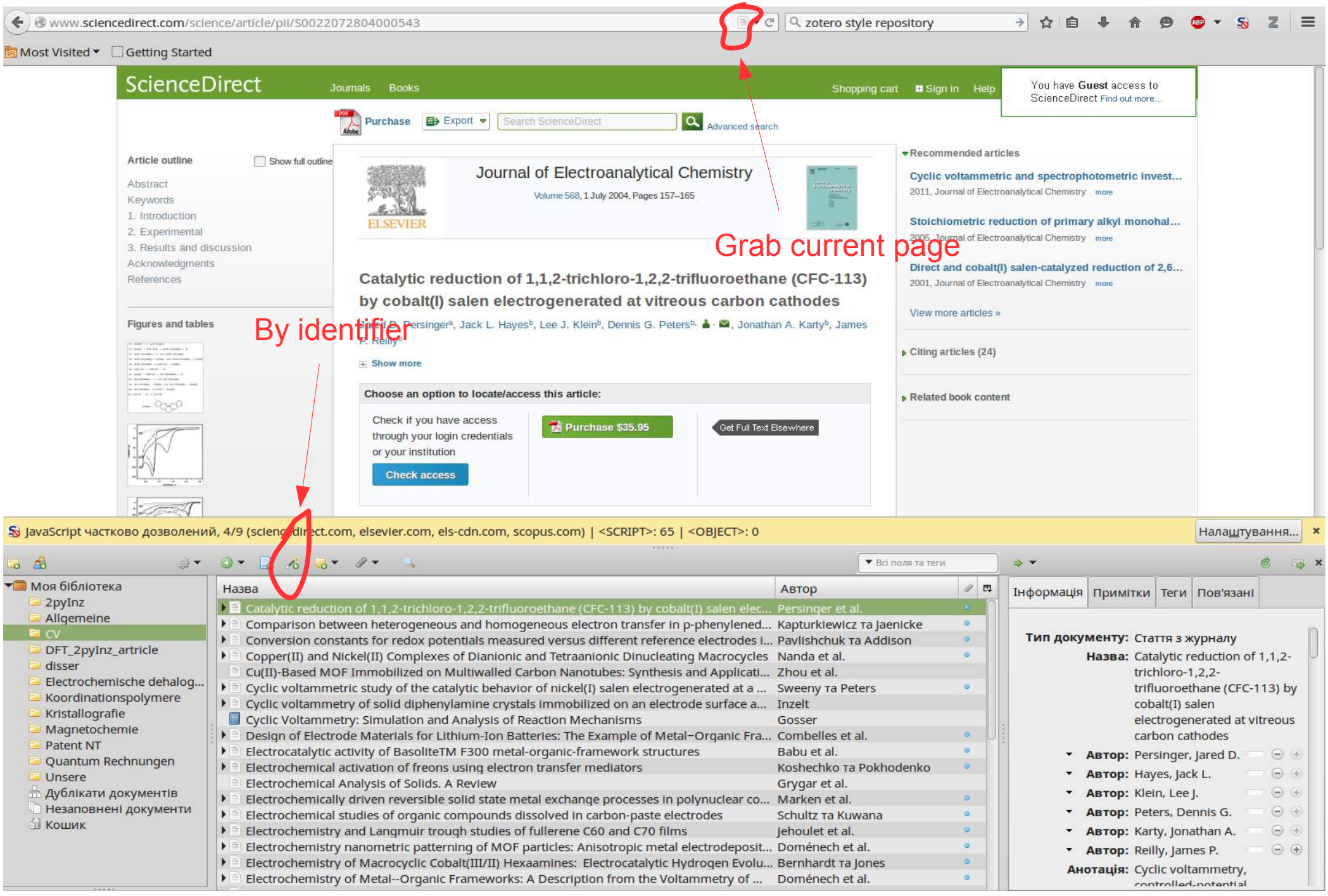
- F/LOSS (AGPL)
- Firefox plugin / Standalone application + Office plugins
- Includes:
  - A set of citation grabbers (by URL, DOI, ISBN, *etc.*);
  - Organization using: collections, tags, overall search;
  - Synchronization via Zotero's own service.
- Huge library of style definitions via XML-based Citation Style Language (CSL) — and yes, including even 'GOST' massacre

  https://www.zotero.org/styles (one-click installation)
- Intercommunication with BibTeX collections, Mendeley *etc.*

Zotero: organization of the library



Grabbing citations



Citation styles

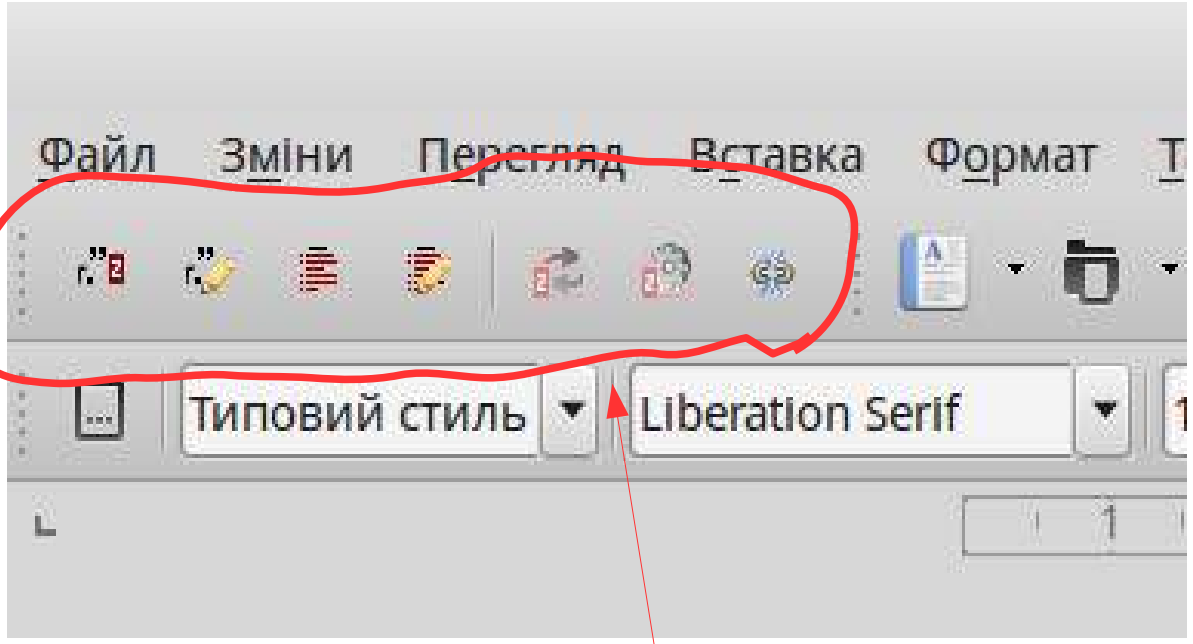
Fragment of definition of citations in Journal of American Chemical Society

```
<if type="article-magazine">
        <group delimiter=" ">
          <text variable="container-title" font-style="italic" suffix="."/>
          <text macro="edition"/>
          <text macro="publisher"/>
          <text macro="full-issued" suffix=","/>
          <text macro="pages"/>
        </group>
      </if>
      <else-if type="thesis">
        <group delimiter=", ">
          <group delimiter=". ">
            <text variable="title"/>
            <text variable="genre"/>
          </group>
          <text macro="publisher"/>
          <text macro="issued"/>
          <text macro="volume"/>
          <text macro="pages"/>
        </group>
      </else-if>
```

Adaptation of the closest style is possible via a visual editor (search of the closest one basing on example is included in the editor):
http://editor.citationstyles.org/searchByExample/

Office plugins

Available: Open/Libre Office, M$ Office>=2003.

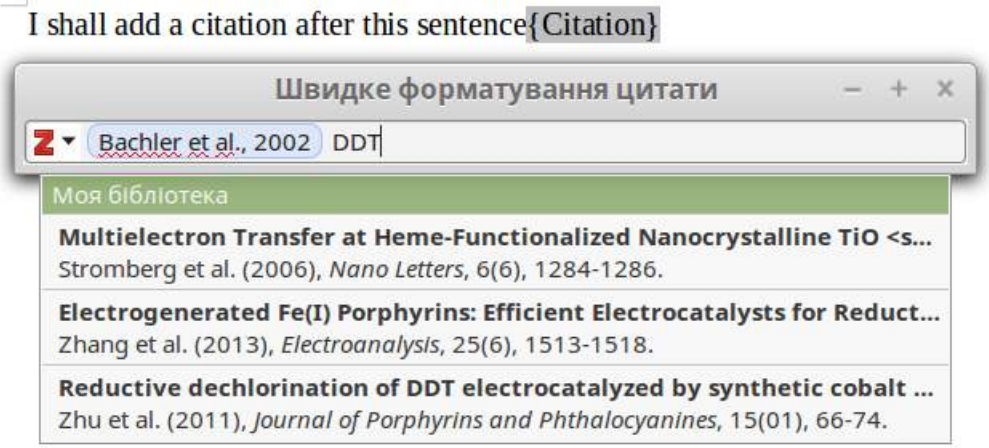


Zotero office plugin adds it's toolbar (main way to access its capabilities)

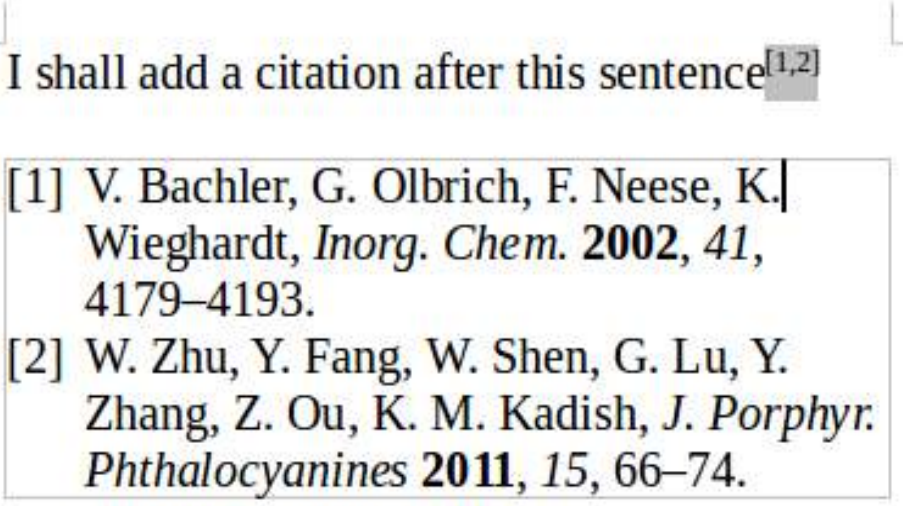
- Adding citation;
- Edit citation
- Insert bibliography
- Edit bibliography
- Refresh
- Set document preferences
- Remove field codes

Adding citation

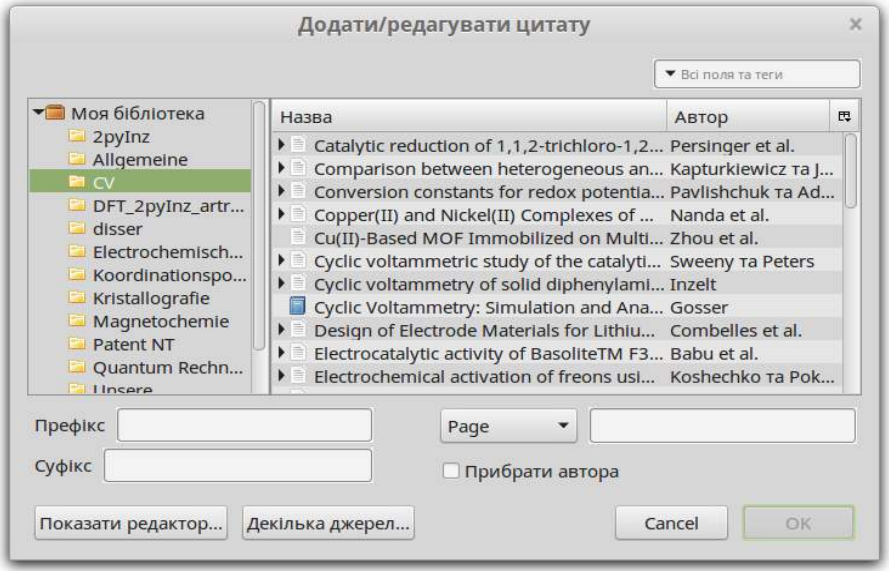
“Quick” interface:

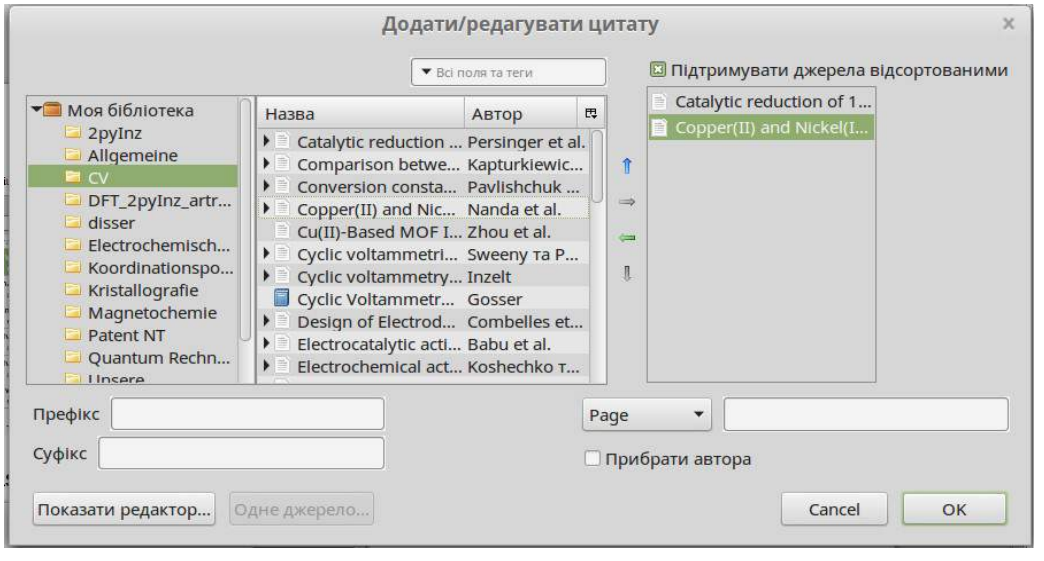


Result:



“Classic” (extended) view:





Document preferences

Are set during first usage of Zotero in the document and may be changed in any time

- A way of citation storage:
  - Reference Marks (OO)/Fields (M$) — easy copy-paste, no OO/M$ interchange — *default*.
  - Bookmarks — allow OO/M$ interchange, but no copy-paste in text.
- Citation style (choose from list of installed)
- Store references in Document or not? (default — yes).

Editing and co-editing

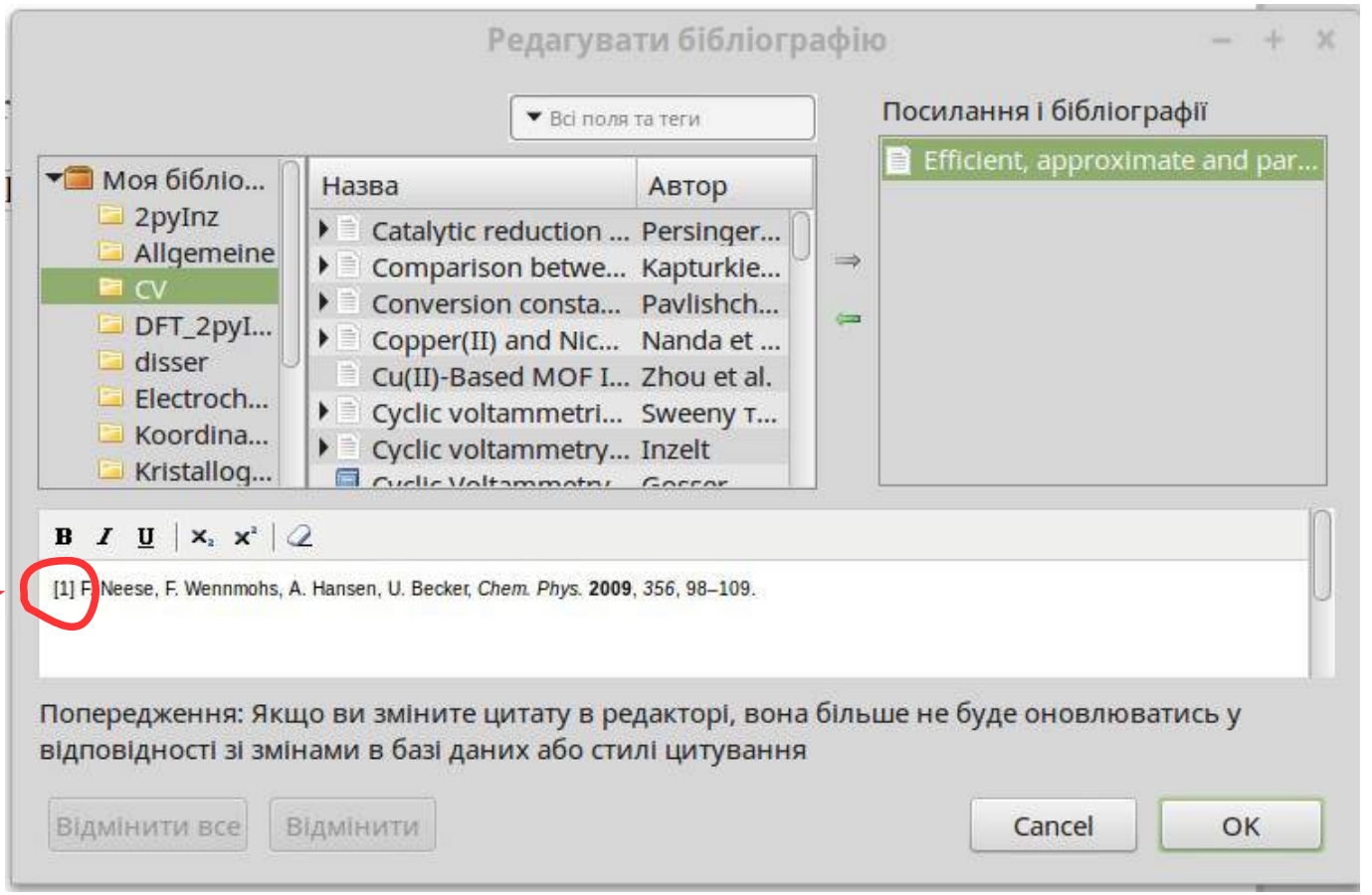
- If citations are in Reference Marks (OO)/Fields (M$):
  - The citations in text behave as the part of the text (may be copied, cut, deleted, pasted (both within the text or to a new document);
  - The document with Zotero citations may be processed on other computers without Zotero (even on M$ Office 97 =)), one should just refresh the bibliography after this on the system with Zotero.

Tips and tricks: manual citation editing

- Direct editing is ineffective (changes will be missed after next refresh).
- Direct editing is possible after field code removal.
- Otherwise: internal capabilities.

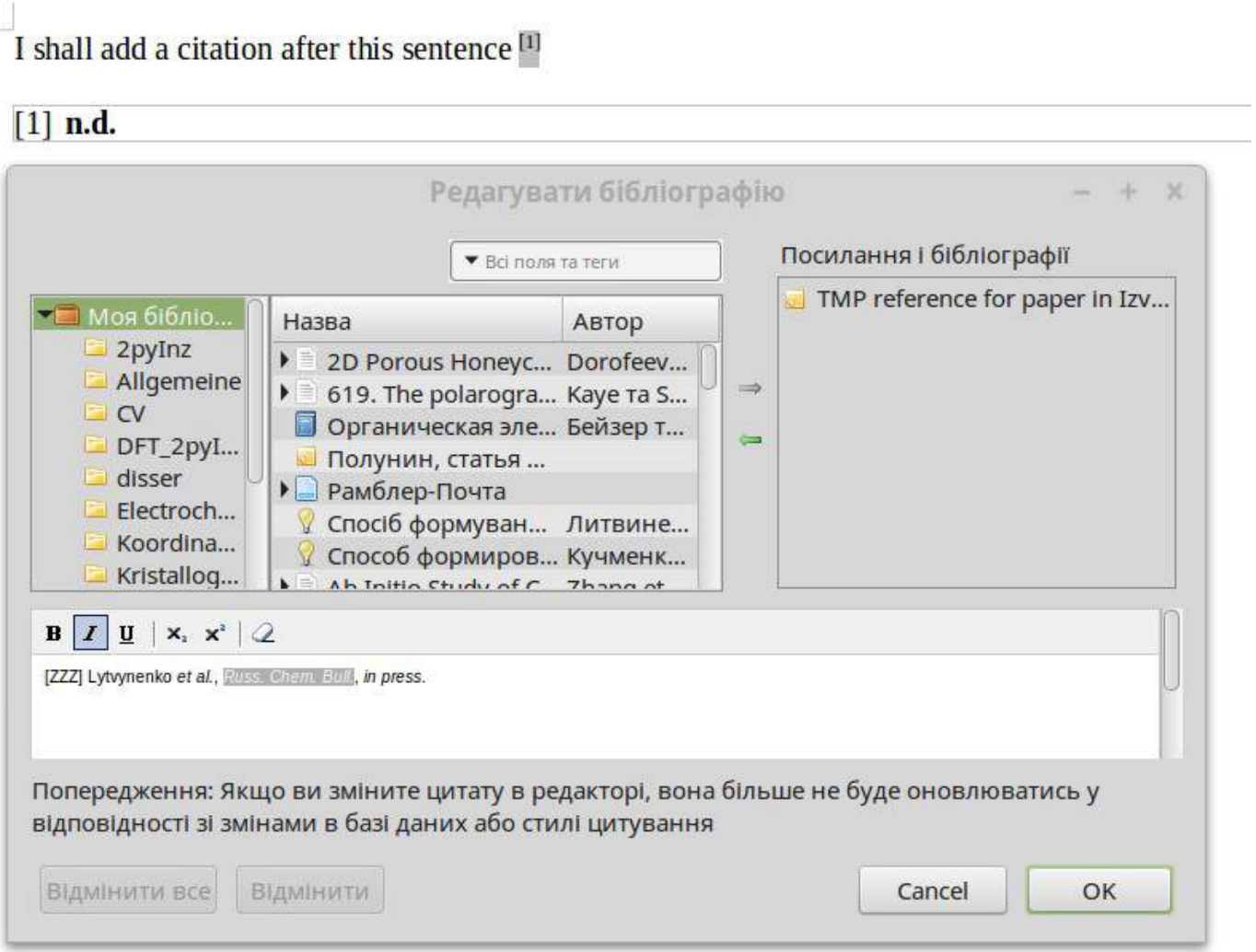
No automatic update for edited citations will be performed by Zotero.

The number in the bibliography list won't be updated too! (reodering and renumbering the in text will be ok)



Tips and tricks: manual creation

- Same technics — editing of the citations;
- Dummy object should be used as the original citation (*e.g.* Zotero note).



Tips and tricks: composite citations

Composite citation looks like that[1]. Sometimes it is useful, until these perverts don't use something like [1a-b,d]...

[1] (a) V. Bachler, G. Olbrich, F. Neese, K. Wieghardt, *Inorg. Chem.* **2002**, *41*, 4179–4193. (b) F. Neese, F. Wennmohs, A. Hansen, U. Becker, *Chem. Phys.* **2009**, *356*, 98–109. (c) F. Neese, *Wiley Interdiscip. Rev. Comput. Mol. Sci.* **2012**, *2*, 73–78. (d) K. Ray, T. Petrenko, K. Wieghardt, F. Neese, *Dalton Trans.* **2007**, 1552.

- Zotero doesn't support composite citations natively, but there is a way:
  - Use Zotero to generate usual citations;
  - Copy them and edit to make a text for your composite citation;
  - Make a “dummy citation” (as previously shown);
  - Replace it's text by your composite citation.
  - Enjoy automatic reordering and renumbering by Zotero.

Conclusions and experience

- Zotero is a F/LOSS software that provides easy and highly automatic way to:
  - collect, organize and synchronize your citation database of scientific documents;
  - prepare (provide formatting, numbering and ordering of items) bibliography for your scientific works (“BibTeX-style”);
- Immodest list of results:

[1] A. S. Lytvynenko, S. V. Kolotilov, M. A. Kiskin, O. Cador, S. Golhen, G. G. Aleksandrov, A. M. Mishura, V. E. Titov, L. Ouahab, I. L. Eremenko, et al., *Inorg. Chem.* **2014**, *53*, 4970–4979.

[2] A. S. Lytvynenko, R. A. Polunin, M. A. Kiskin, A. M. Mishura, V. E. Titov, S. V. Kolotilov, V. M. Novotortsev, I. L. Eremenko, *Theor. Exp. Chem.* **2015**, *51*, 54–61.

[3] A. S. Lytvynenko, M. A. Kiskin, V. N. Dorofeeva, A. M. Mishura, V. E. Titov, S. V. Kolotilov, I. L. Eremenko, V. M. Novotortsev, *J. Solid State Chem.* **2015**, *223*, 122–130.

[4] A. S. Lytvynenko, S. V. Kolotilov, M. A. Kiskin, I. L. Eremenko, V. M. Novotortsev, *Phys. Chem. Chem. Phys.* **2015**, *17*, 5594–5605.

[5] А. С. Литвиненко, А. М. Мишура, В. Е. Титов, М. А. Кискин, С. Голхен, О. Кадор, С. В. Колотилов, Л. Уаб, И. Л. Еременко, В. М. Новоторцев, *Известия АН сер.хим.* **2015**, 306–317.