Electronic Supplementary Information

V-containing ZrO_2 inorganic yellow nano-pigments

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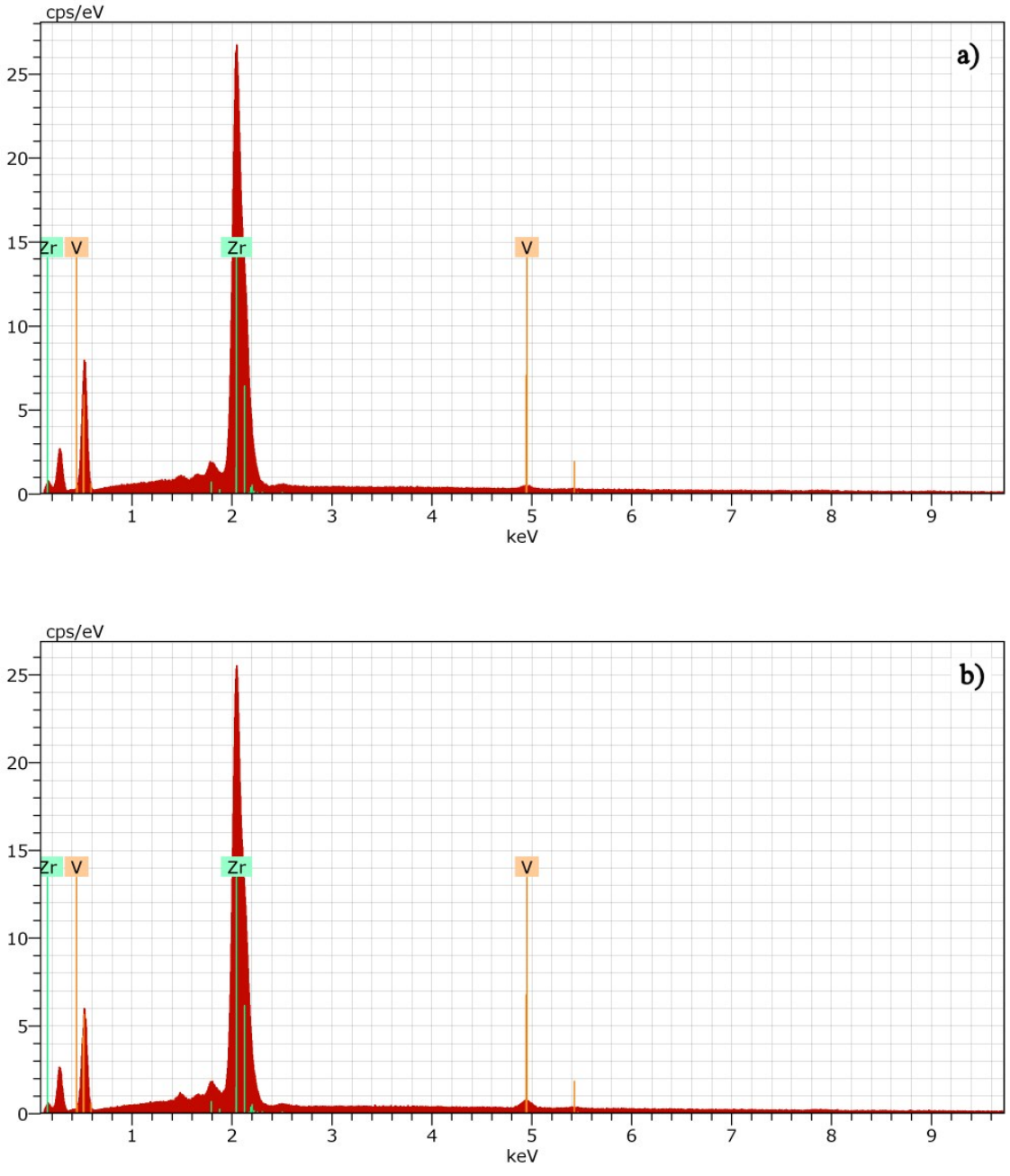


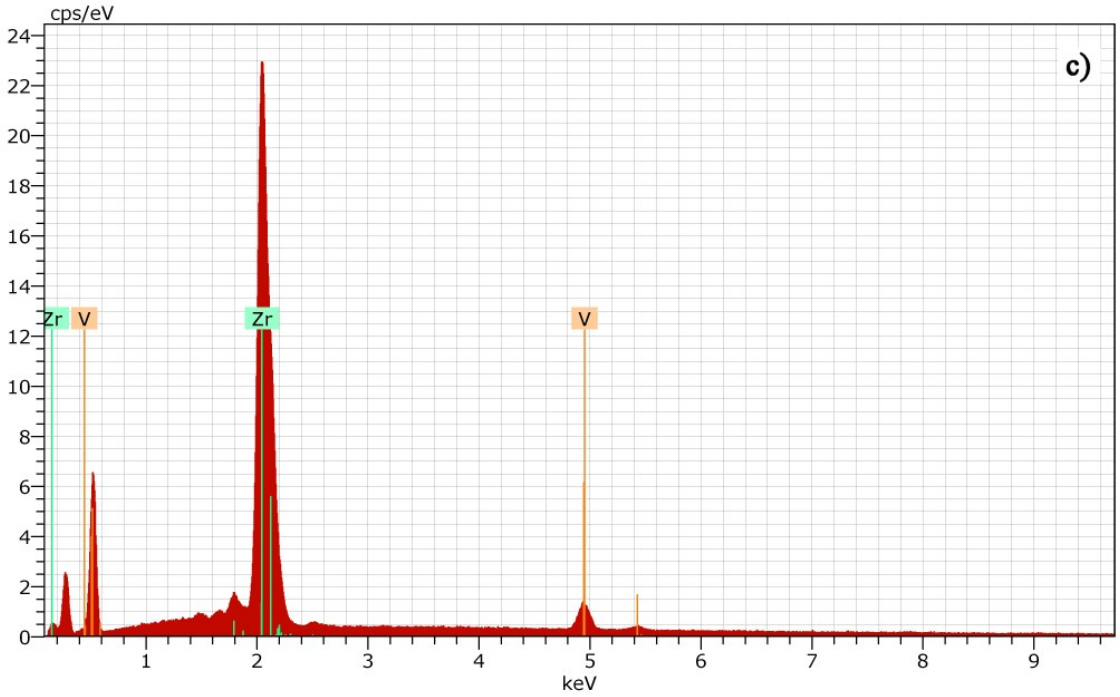


Fig. 1S. EDX microanalysis of as-obtained $V_xZr_{1-x}O_2$ precipitates. a) x=0.015, b) x=0.05 and c) x=0.1.

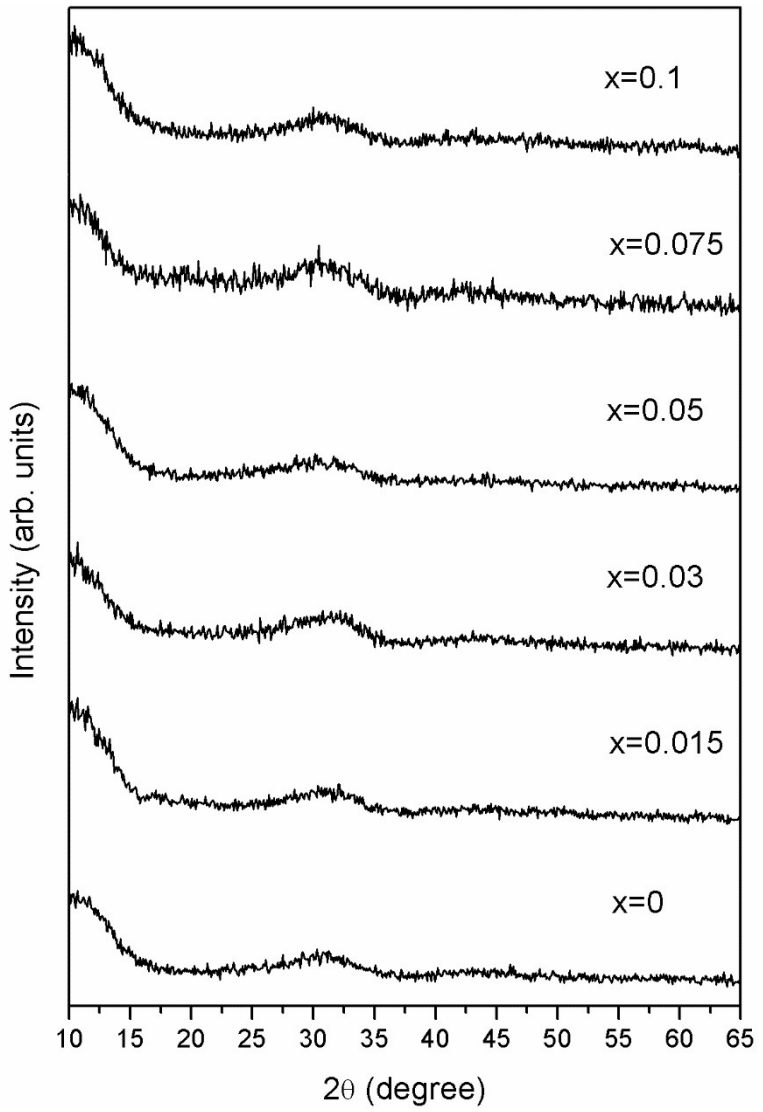


Fig. 2S. XRD patterns of as-obtained $V_xZr_{1-x}O_2$ precipitates.

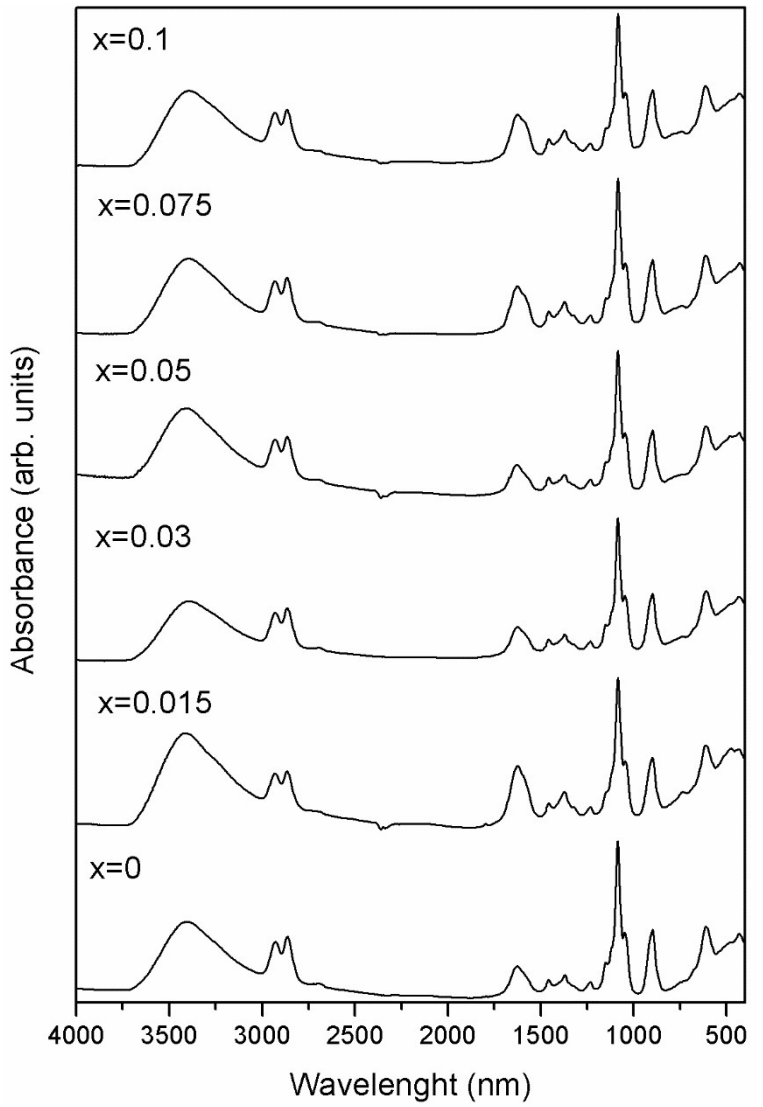


Fig. 3S. IR spectra of as-obtained $V_xZr_{1-x}O_2$ precipitates.

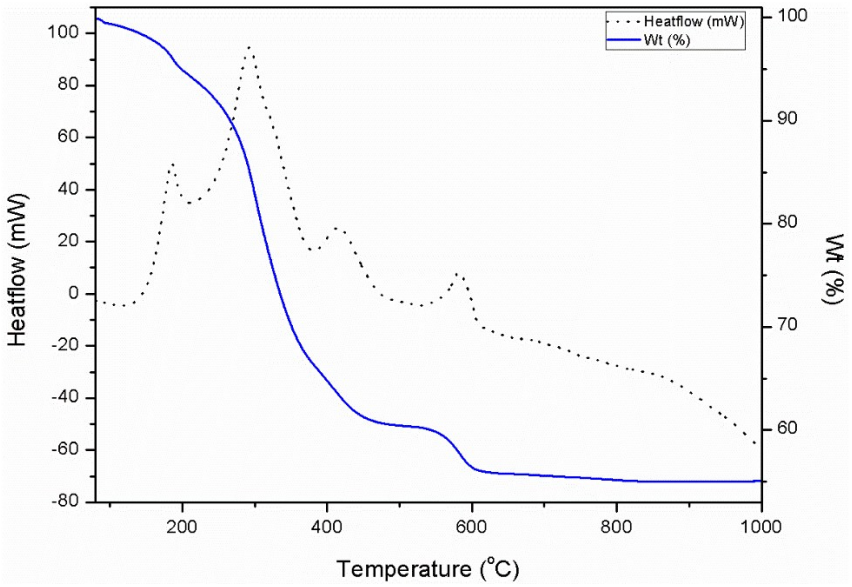


Fig. 4S. TG and DTA of the as-obtained $V_{0.05}Zr_{0.95}O_2$ precipitate.

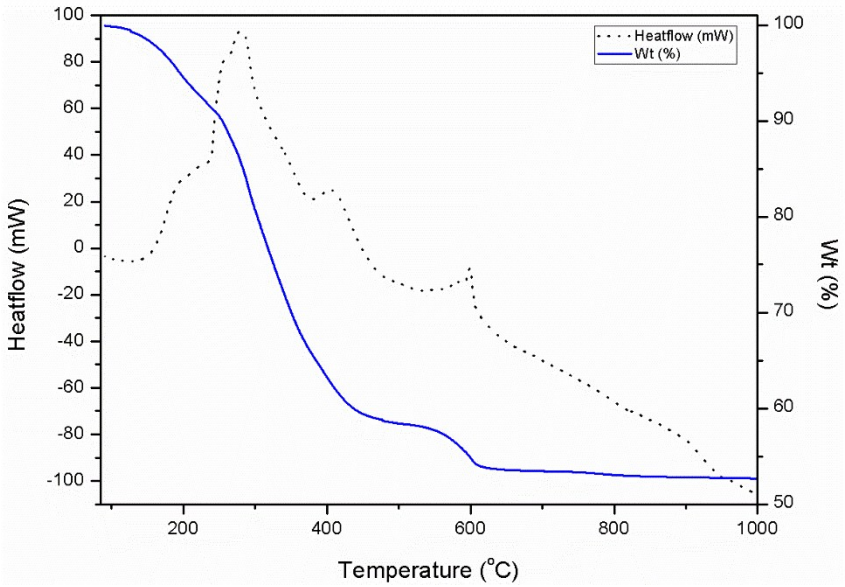


Fig. 5S. TG and DTA of the as-obtained $V_{0.1}Zr_{0.9}O_2$ precipitate.

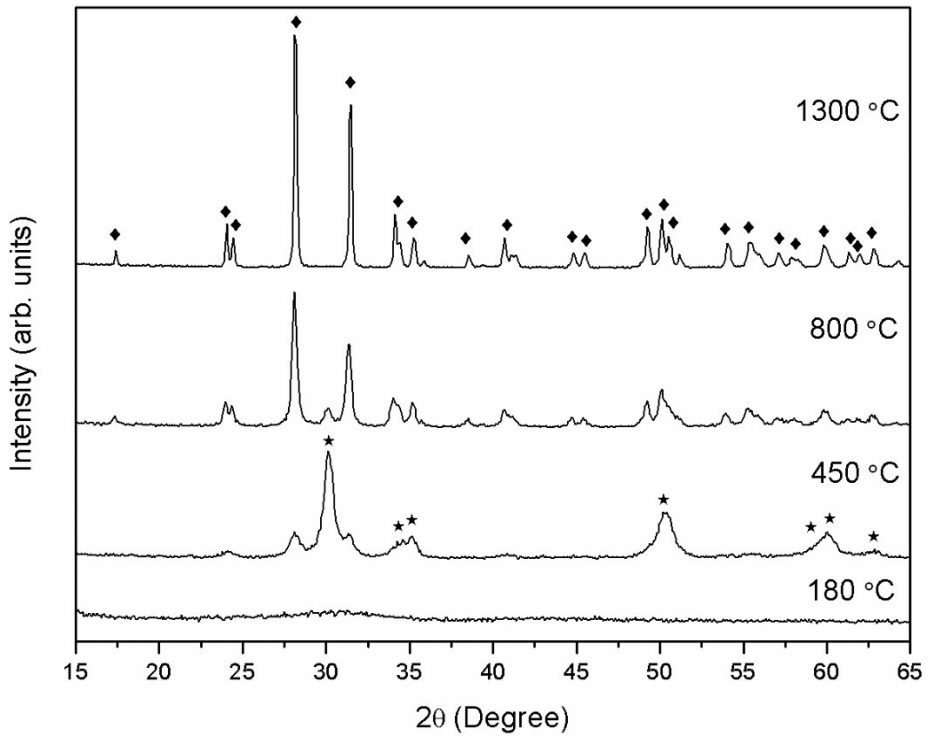


Fig. 6S. XRD patterns of undoped ZrO_2 precipitate prepared by using EG as solvent after annealing at different temperatures for 3h. ★ is tetragonal zirconia and ♦ is monoclinic zirconia.

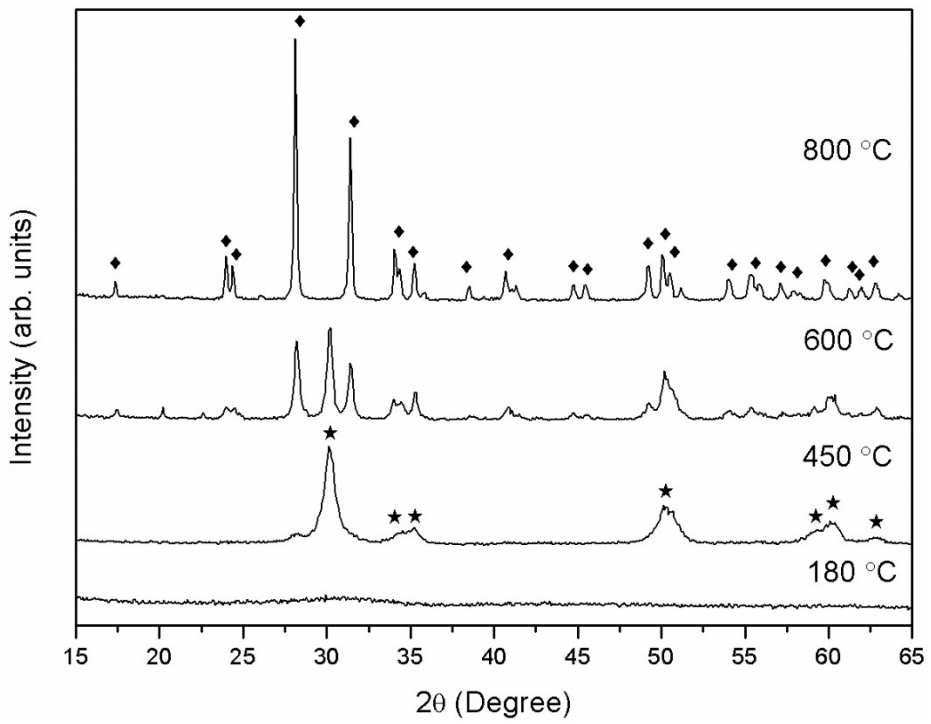
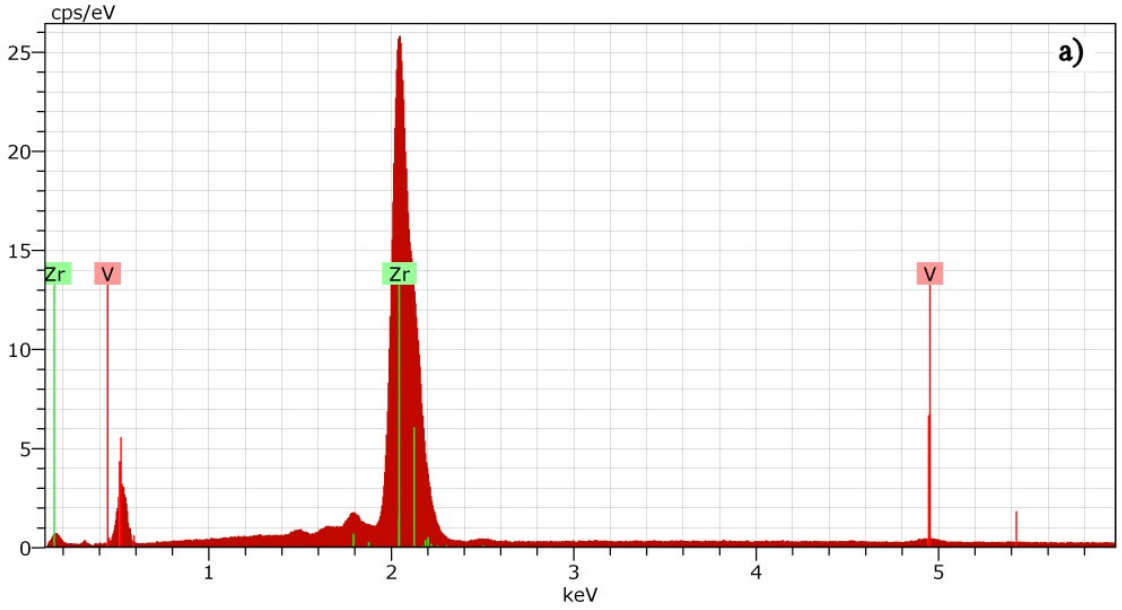


Fig. 7S. XRD patterns of $V_{0.1}Zr_{0.9}O_2$ precipitate prepared by using EG as solvent after annealing at different temperatures for 3h. ★ is tetragonal zirconia and ♦ is monoclinic zirconia.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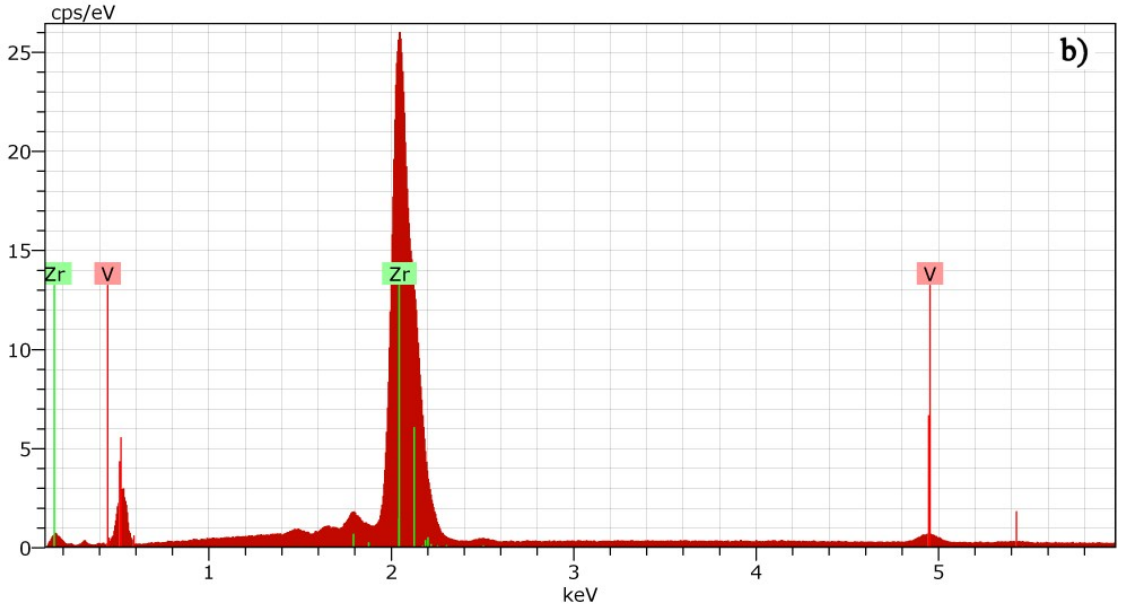
cps/eV
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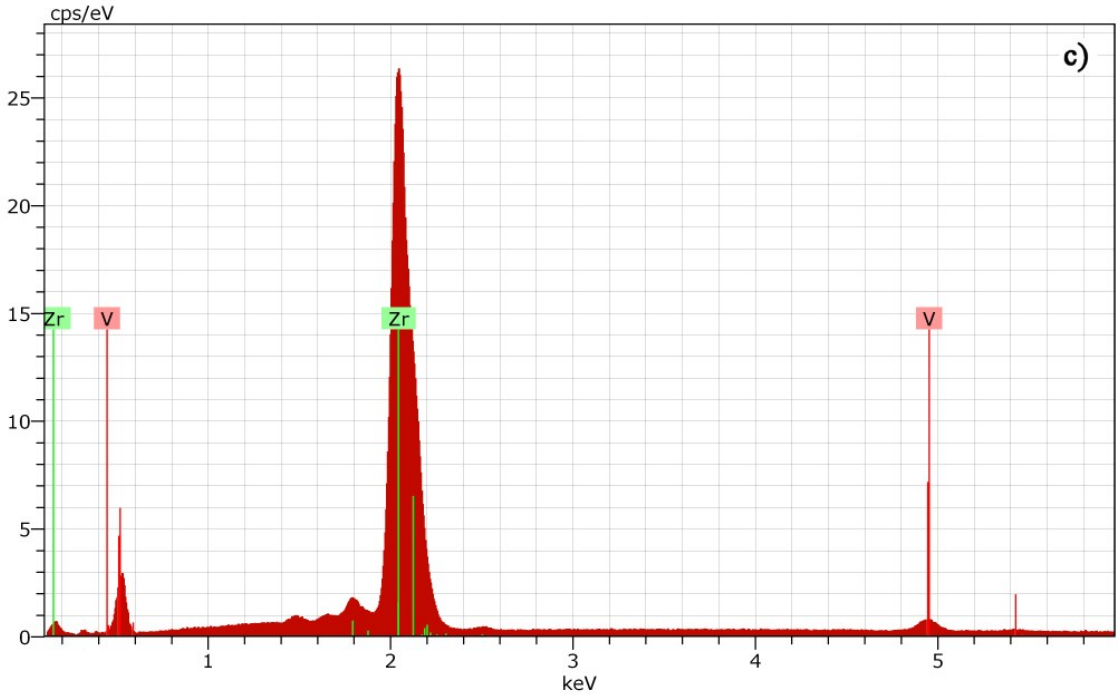

Fig. 8S. EDX microanalysis of monoclinic $V_xZr_{1-x}O_2$ nano-pigments after annealing at 800ºC. a) x=0.015, b) x=0.05 and c) x=0.1.