



Supplementary Material

XRD-Thermal Combined Analyses: an Approach to Evaluate the Potential of Phytoremediation, Phytomining and Biochar Production

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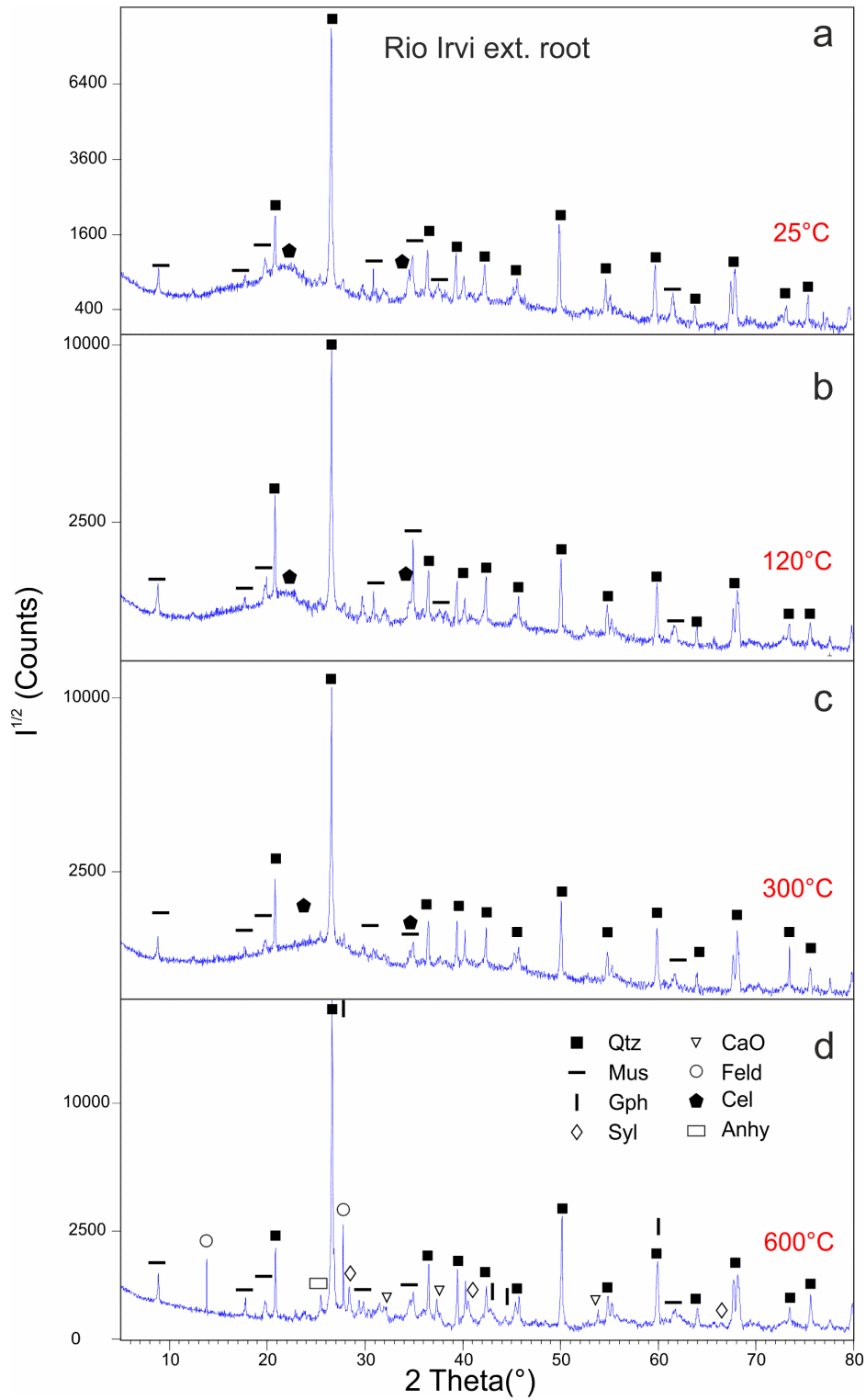


Figure S1. Comparison of XRD patterns collected on external roots from Rio Irvi before (a) and after *ex-situ* heating (b-d). Intensities ($I^{1/2}$) are reported in square root scale. Abbreviation are: Qtz, quartz; Mus, muscovite; Gph, graphite; Syl, sylvite; CaO, calcium oxide; Feld, feldspars, Cell, cellulose; Anhy, anhydrite.

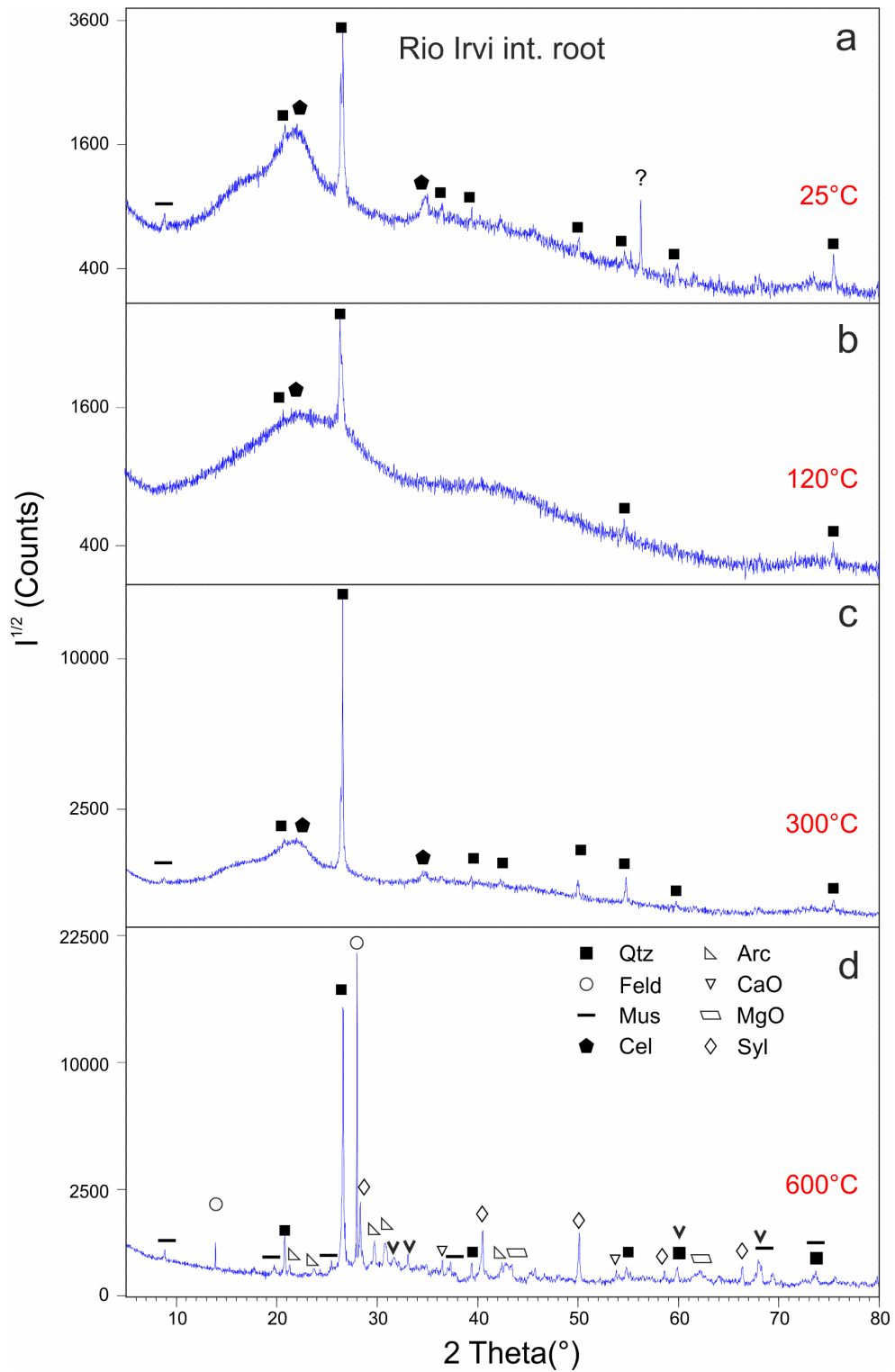


Figure S2. Comparison of XRD patterns collected on internal roots from Rio Irvi before (a) and after *ex-situ* heating (b-d). Intensities ($I^{1/2}$) are reported in square root scale. Abbreviation are: Qtz, quartz; Feld, feldspars; Mus, muscovite; Cel, cellulose; Arc, arcanite; CaO, calcium oxide; MgO, magnesium oxide; Syl, sylvite.

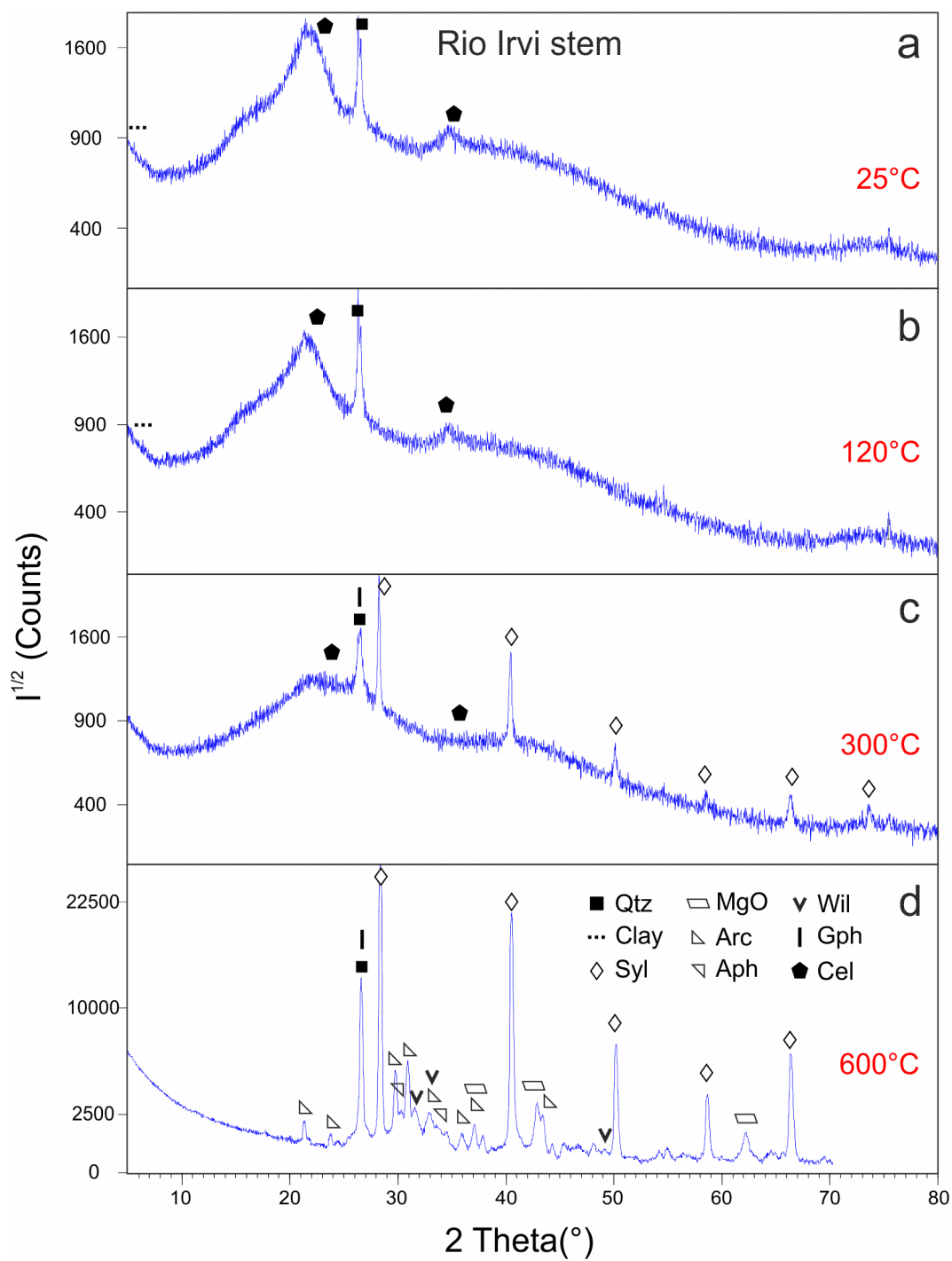


Figure S3. Comparison of XRD patterns collected on stems from Rio Irvi before (a) and after *ex-situ* heating (b-d). Intensities ($I^{1/2}$) are reported in square root scale. Abbreviation are: Qtz, quartz; Clay, clayey minerals; Syl, sylvite; MgO, magnesium oxide; Arc, arcanite; Aph, aphthitalite; Wil, willemite; Gph, graphite; Cell, cellulose.

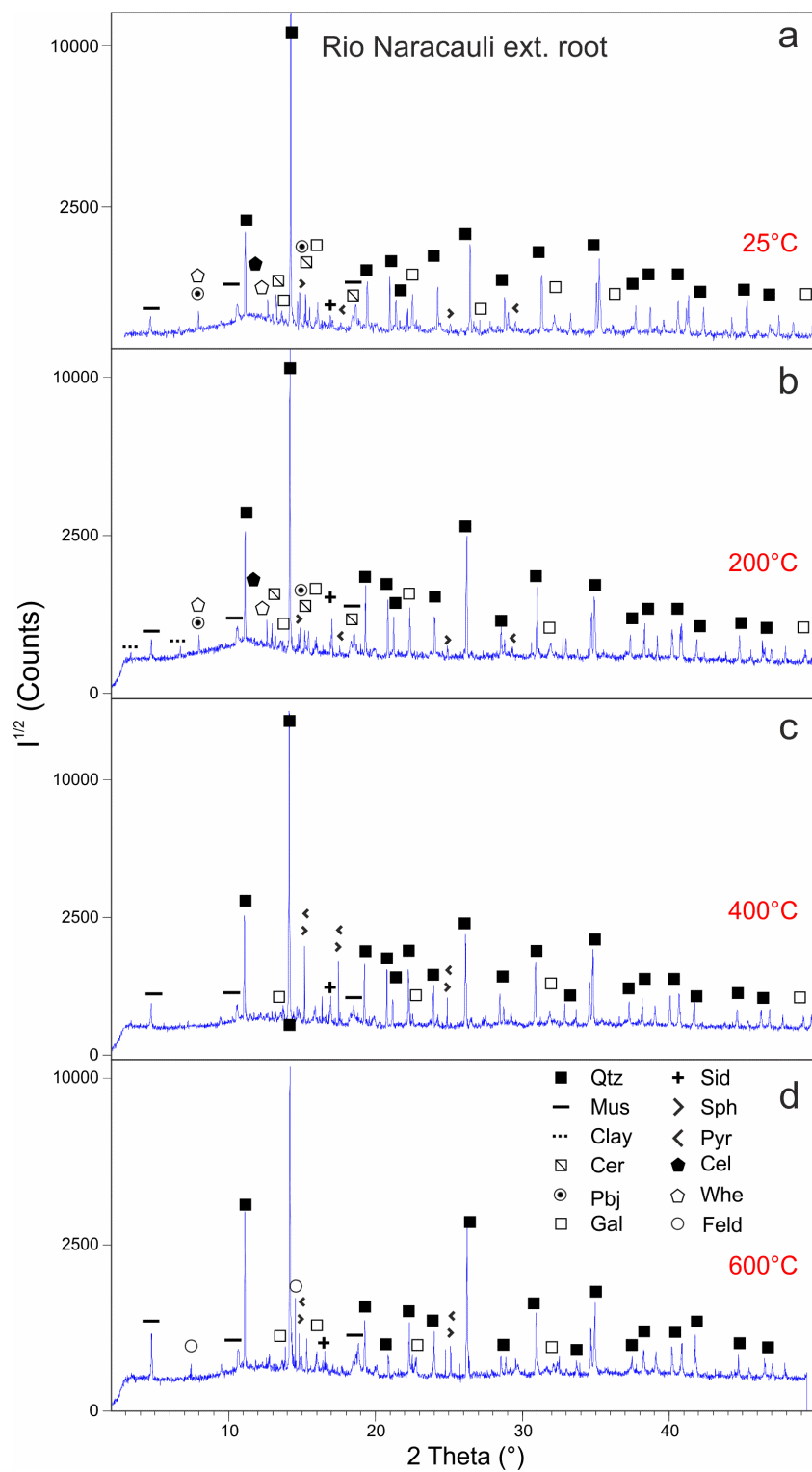


Figure S4. Comparison of XRD patterns collected on external roots from Rio Naracauli before (a) and after *in-situ* heating (b-d). Intensities ($I^{1/2}$) are reported in square root scale. Abbreviation are: Qtz, quartz; Mus, muscovite; Clay, clayey minerals; Cer, cerussite; Pbj, plumbojarosite; Gal, galena, Sid, siderite; Sph, sphalerite; Pyr, pyrite; Cel, cellulose; Whe, whevellite; Feld, feldspars.

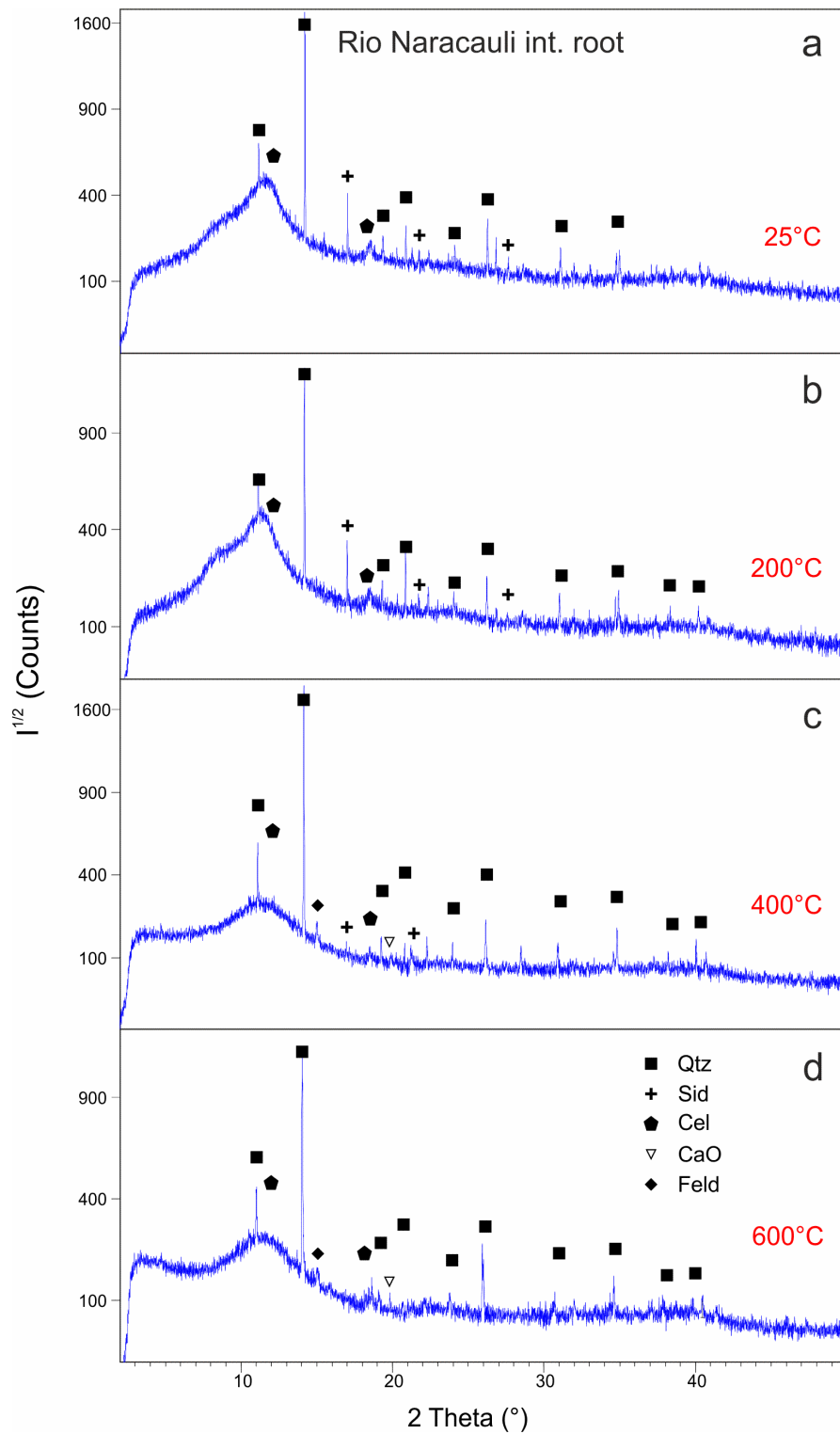


Figure S5. Comparison of XRD patterns collected on internal roots from Rio Naracauli before (a) and after *in-situ* heating (b-d). Intensities ($I^{1/2}$) are reported in square root scale. Abbreviation are: Qtz, quartz; Sid, siderite; Cel, cellulose; CaO, calcium oxide; Feld, feldspars.

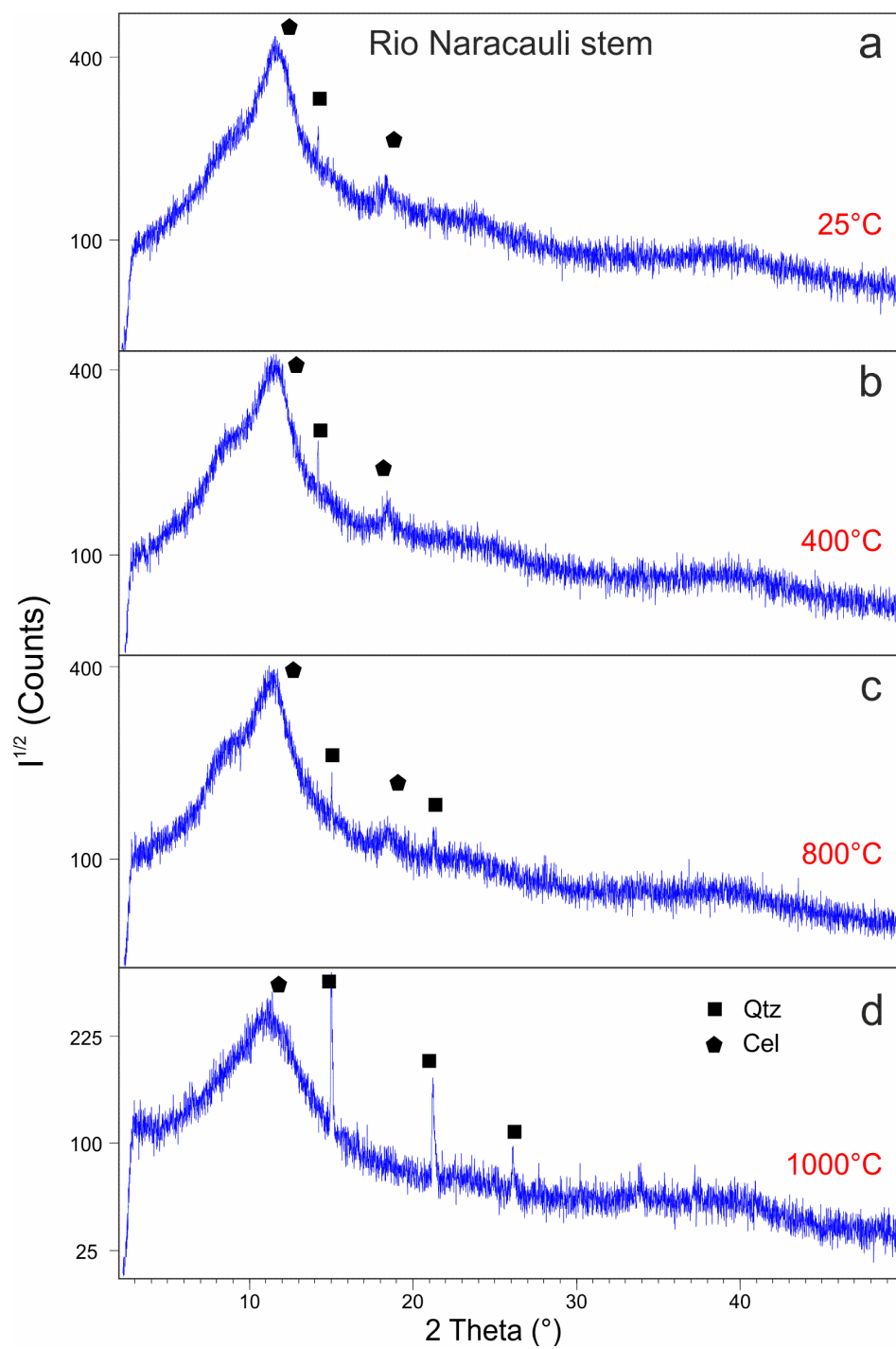


Figure S6. Comparison of XRD patterns collected on stems from Rio Naracauli before (a) and after *in-situ* heating (b-d). Intensities ($I^{1/2}$) are reported in square root scale. Abbreviation are: Qtz, quartz; Cel, cellulose.