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China + Iran = Unreliable?

Cross-sectional Study on *Material Chemistry and Physics*

The 5GH Team

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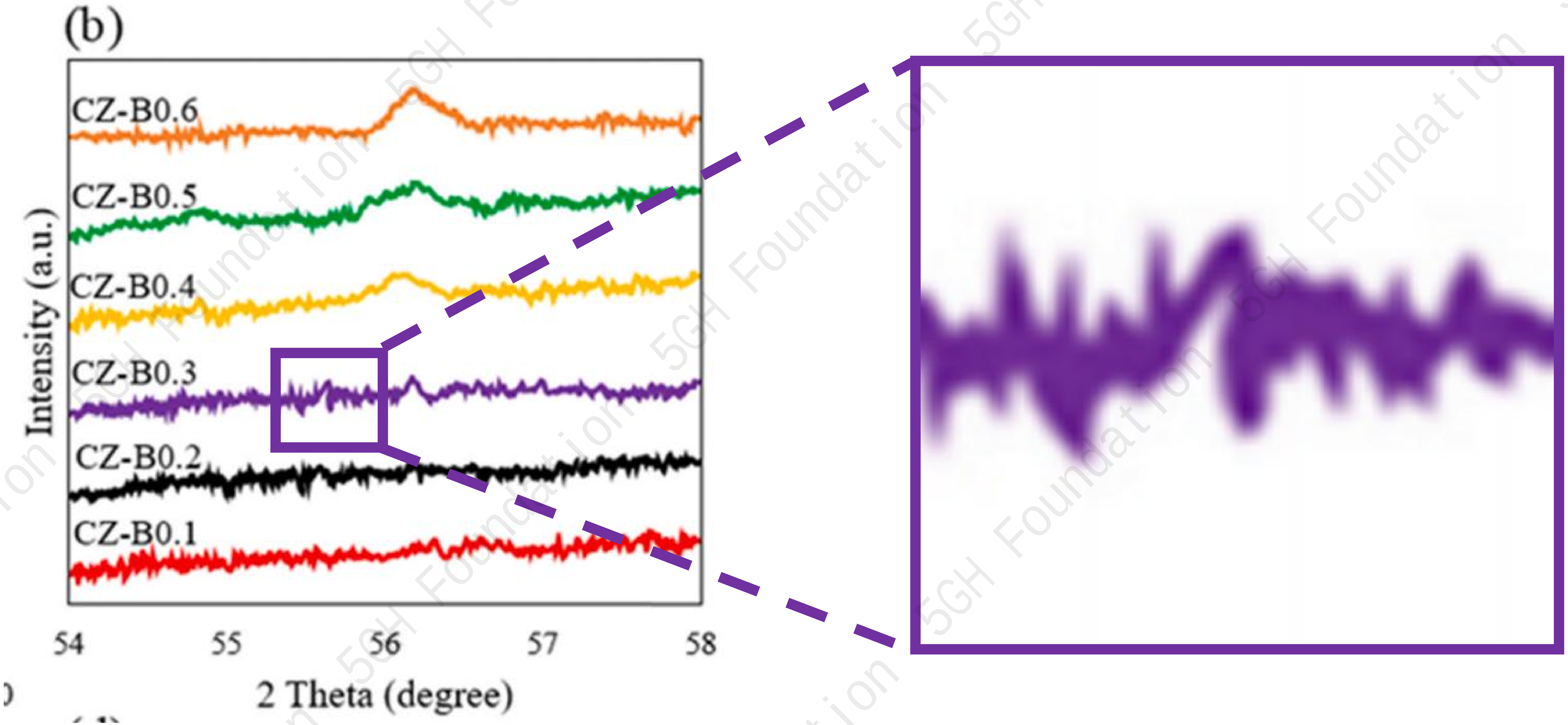
10.1016/j.matchemphys.2024.129428
Figure 2(b), XRD



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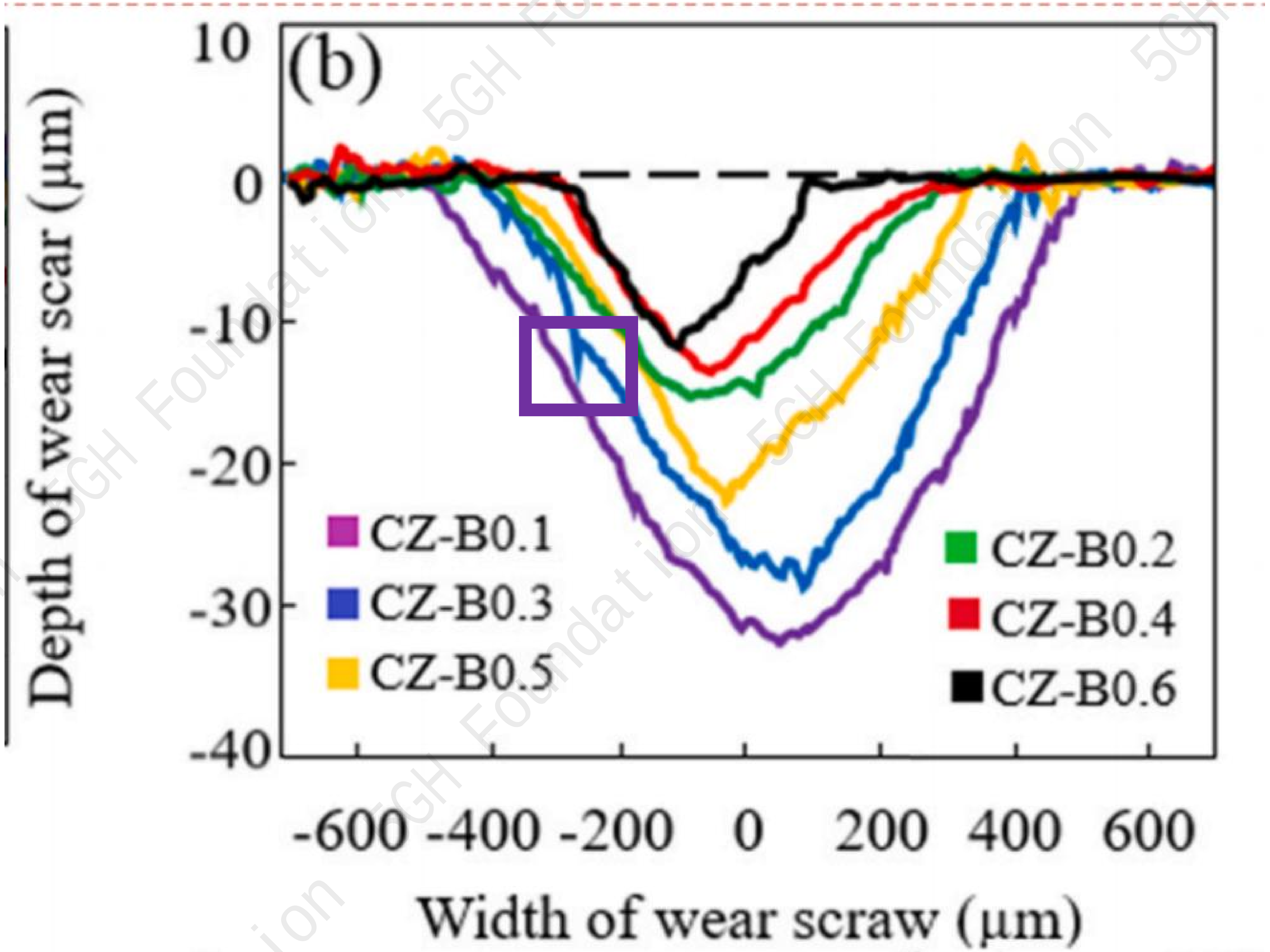
10.1016/j.matchemphys.2024.129428
Figure 12(b), wear test

Is this kind of "anvil" in pruple rectangle normal in wear test?



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10.1016/j.matchemphys.2024.128898
Figure 10 and 20, lengths of the error bars seem idential

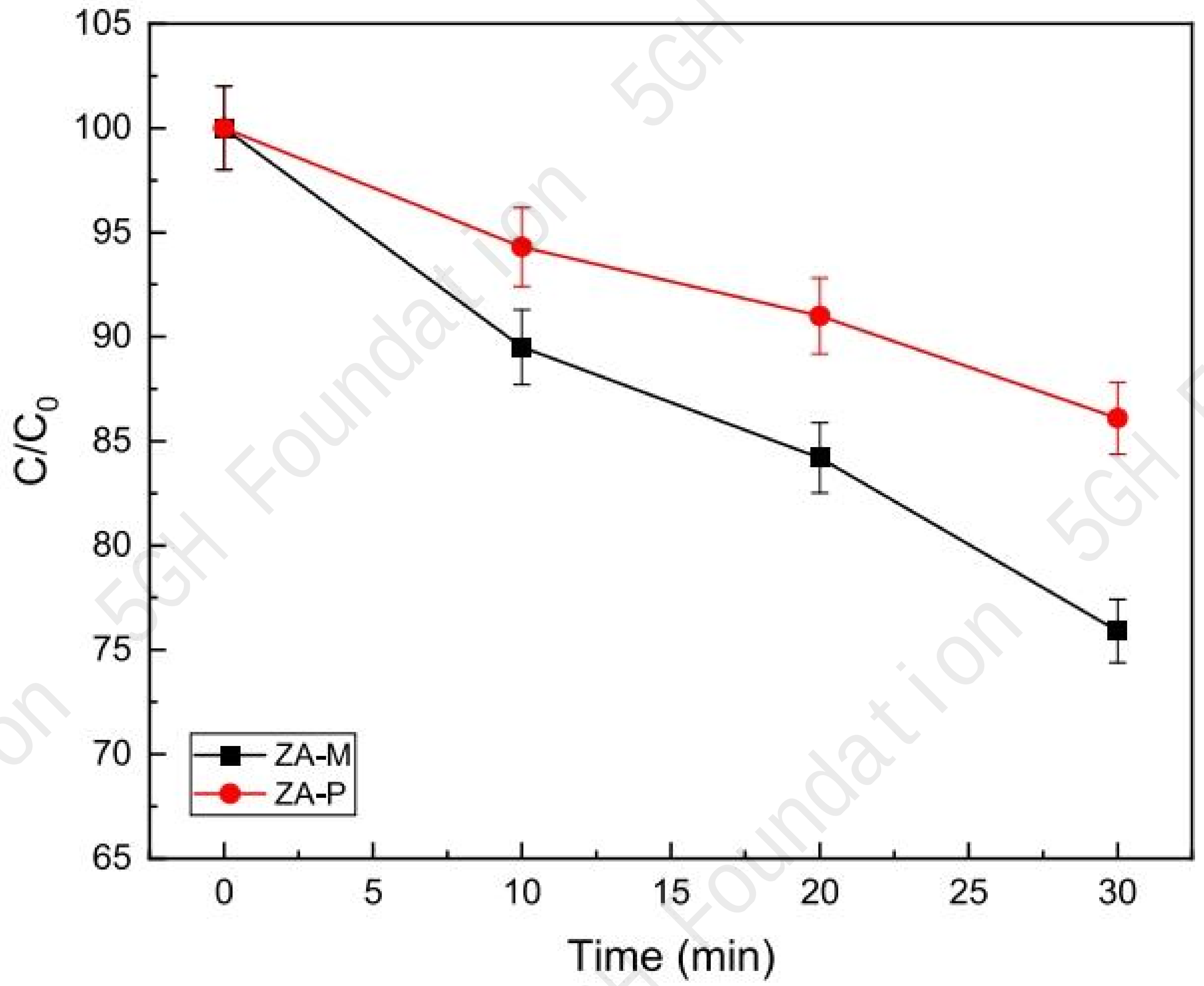

Fig. 10. Removal of MB in dark using ZnAl2O4 nanoparticles prepared with different methods.

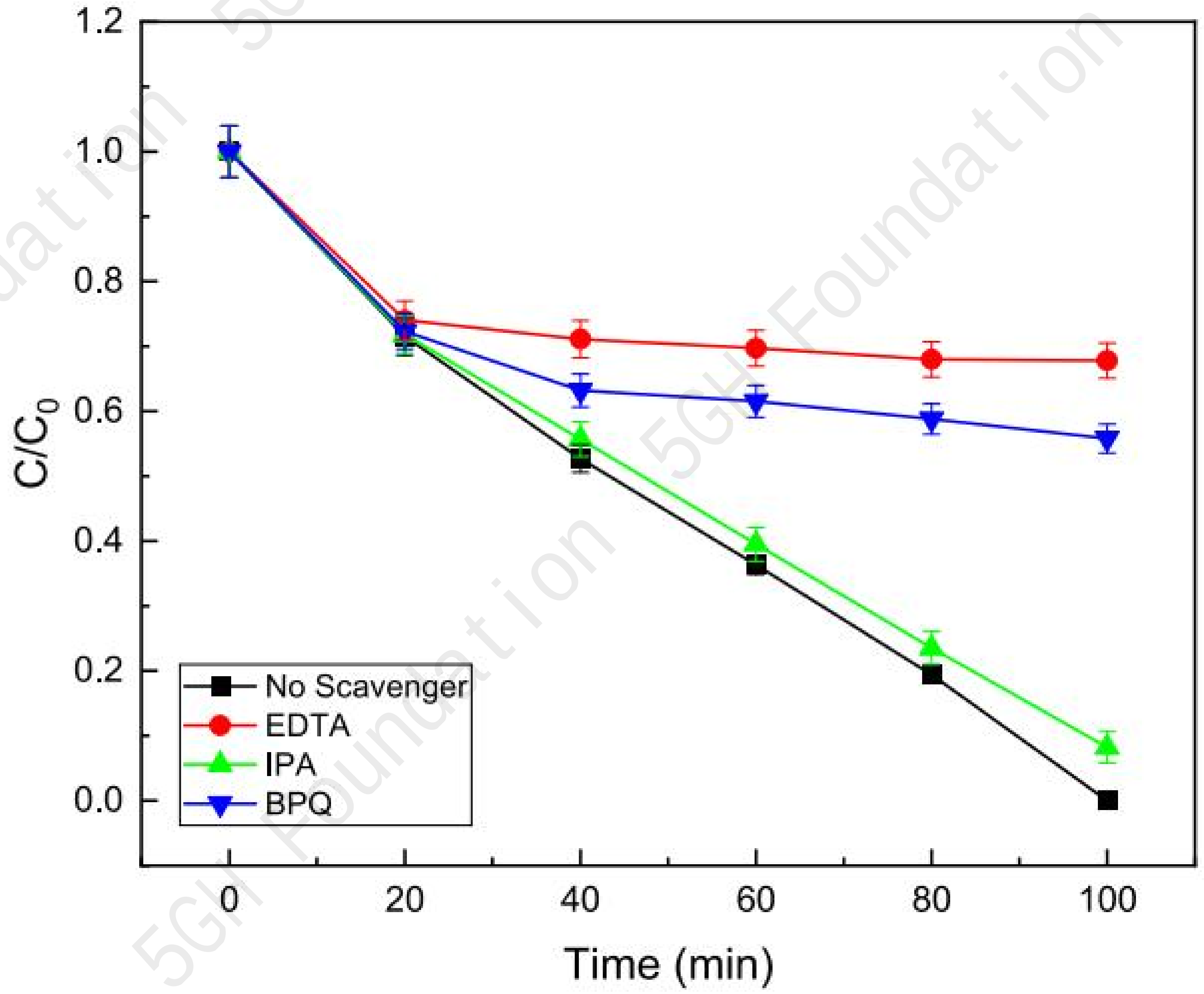

Fig. 20. Effect of different scavengers on the degradation of MB using ZnA-l_2O_4–Ag nanoparticles.

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10.1016/j.matchemphys.2024.128898
Figure 12, noises for the different lines are idential

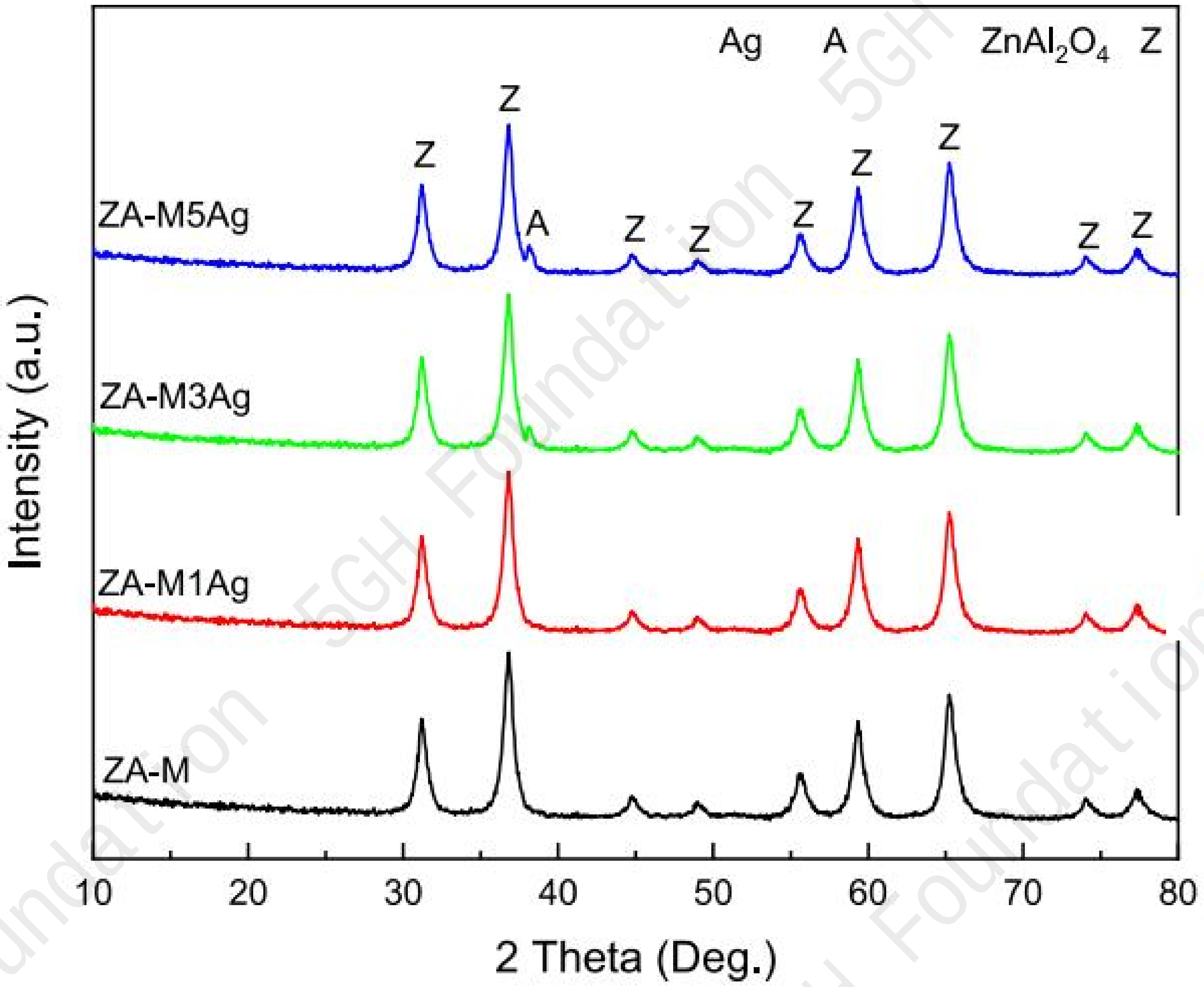

Fig. 12. The X-ray diffraction patterns of synthesized zinc aluminate with amounts of metallic silver.

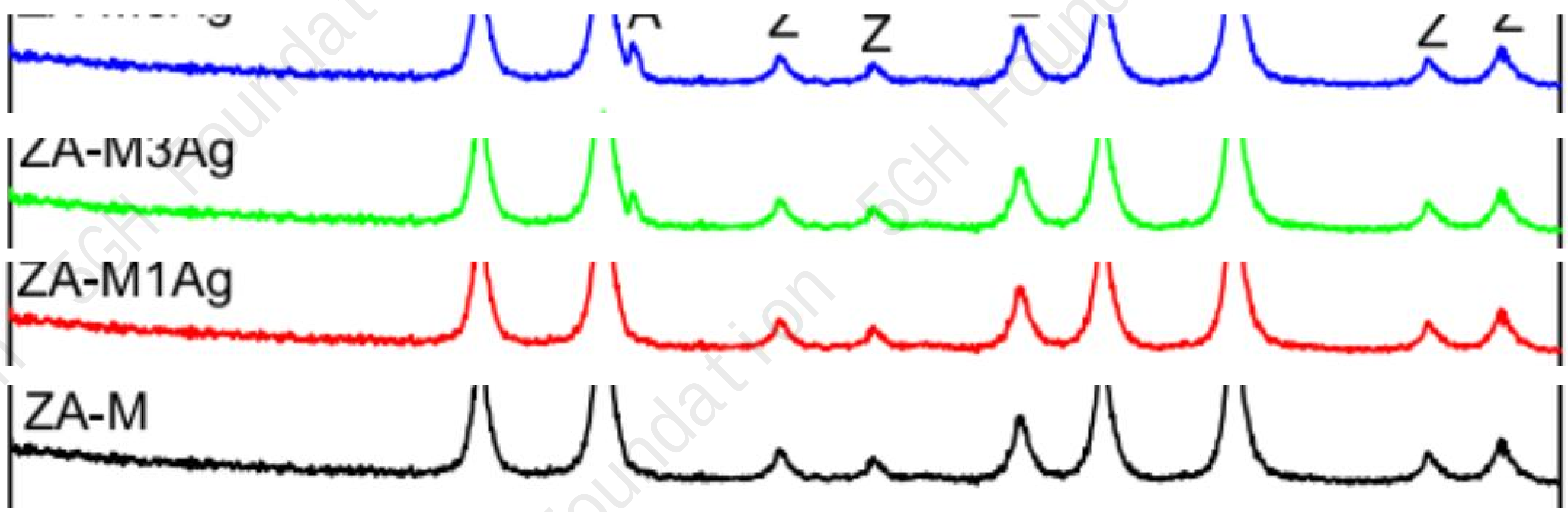

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Figure 14, lines are idential

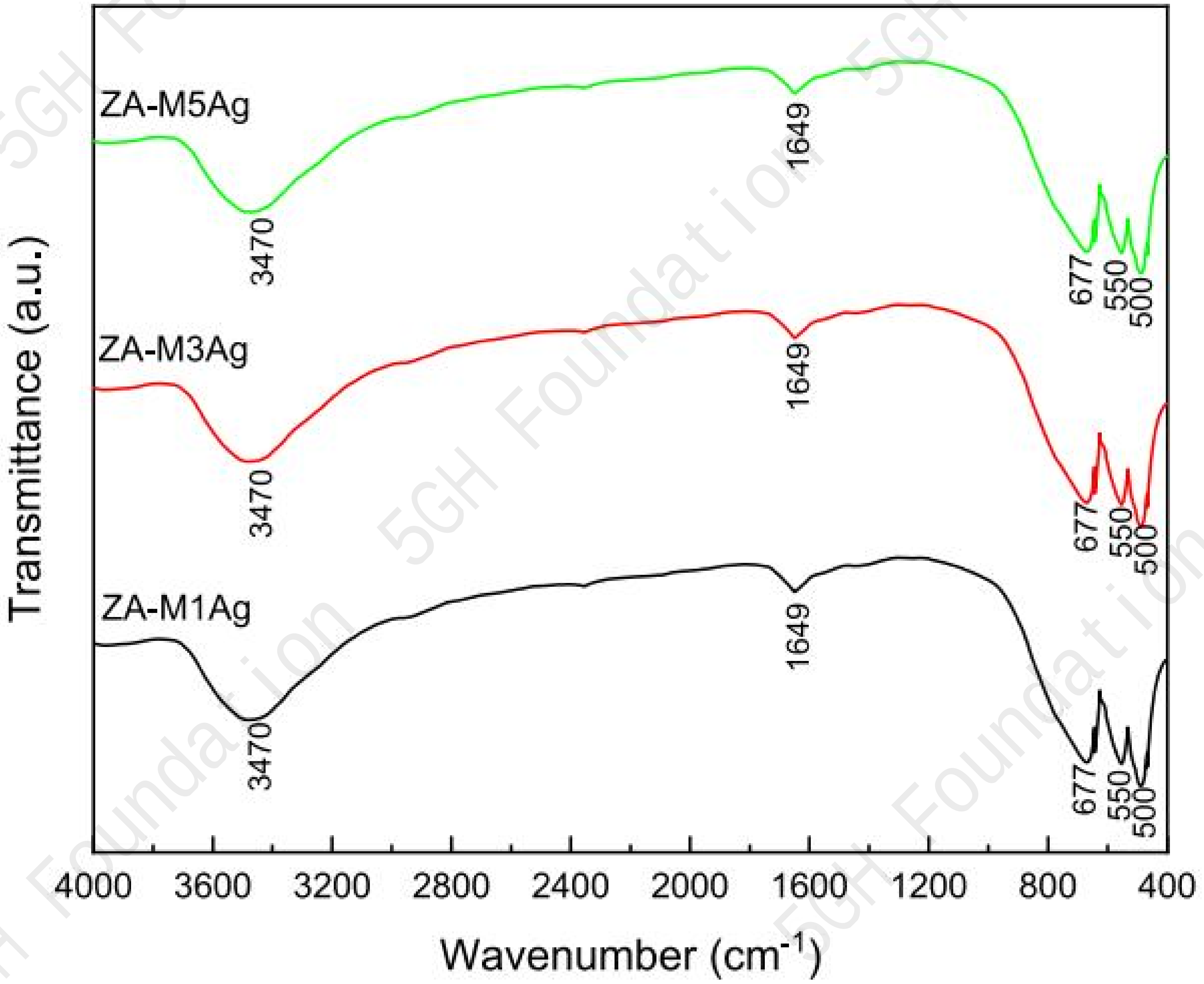

Fig. 14. FTIR analysis of $ZnAl_2O_4$ nanoparticles with different amounts of metallic silver.

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10.1016/j.matchemphys.2024.129876
Table 1: too small standard deviation

Table 1
Density, bending strength and hardness of the prepared composites.

Sintering method/Temperature	Relative density (%)	Bending strength (MPa)	Hardness (HV1/10)	Average grain size (μm)
Microwave 600 °C	89.12 ± 0.1	137 ± 11	78 ± 7	20.3 ± 2.8
Microwave 650 °C	92.21 ± 0.1	162 ± 10	93 ± 8	21.9 ± 2.7
Microwave 700 °C	96.11 ± 0.1	187 ± 9	108 ± 7	21.8 ± 2.8
SPS 450 °C	99.51 ± 0.2	231 ± 11	116 ± 6	68.4 ± 9.3

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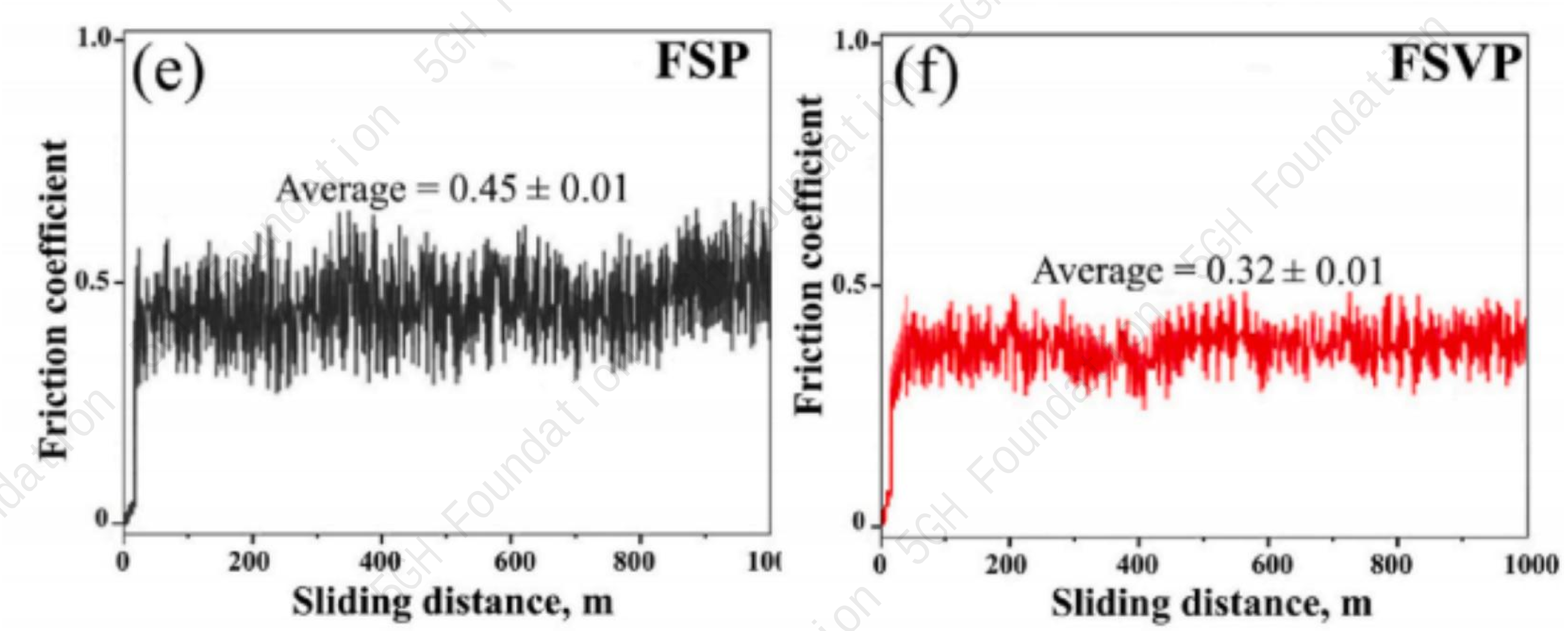
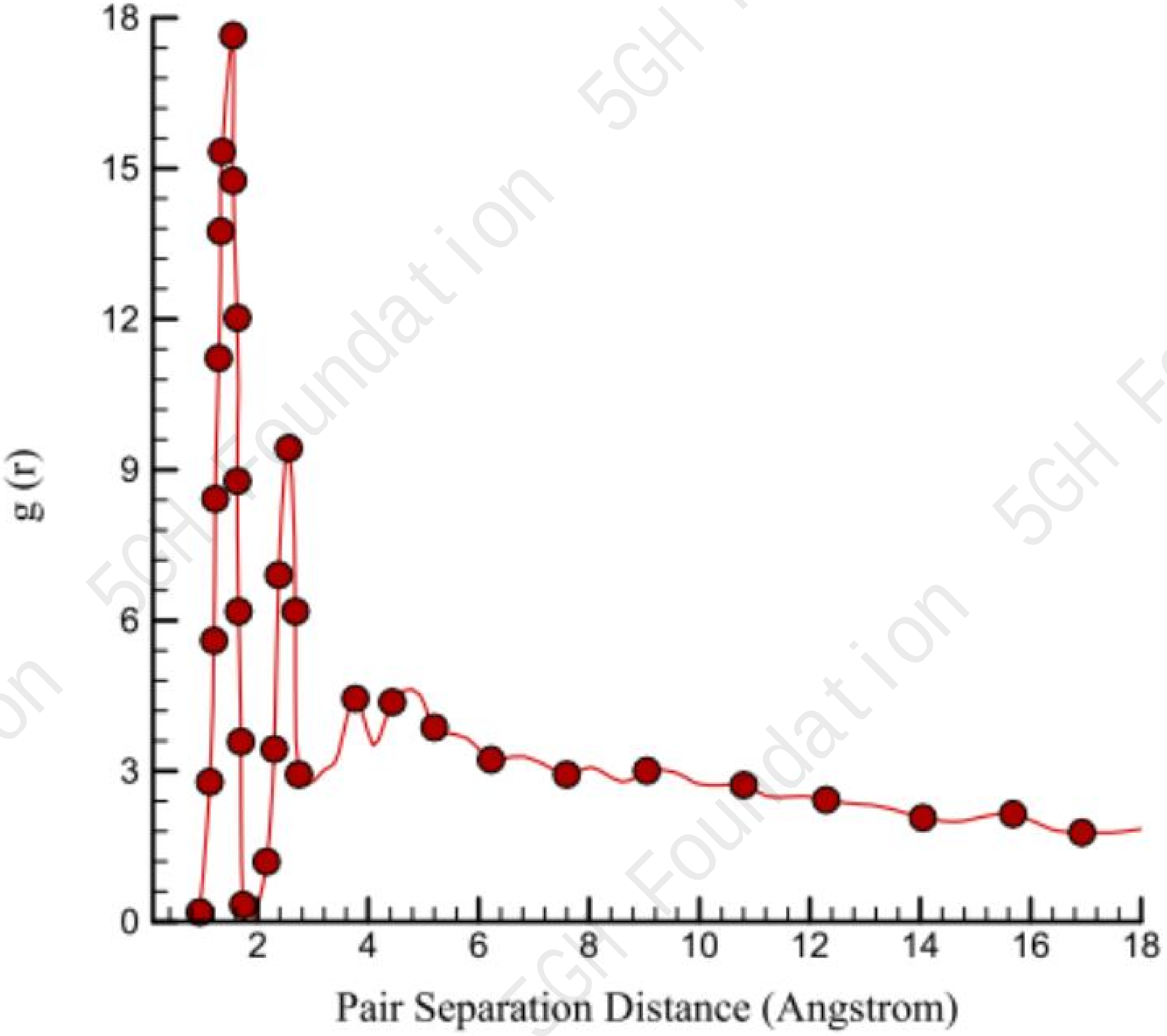
10.1016/j.matchemphys.2024.129149
Figure 6: too small standard deviation



10.1016/j.matchemphys.2023.127555
Figure 5 (left) and Figure 9 (a) (right) are idential



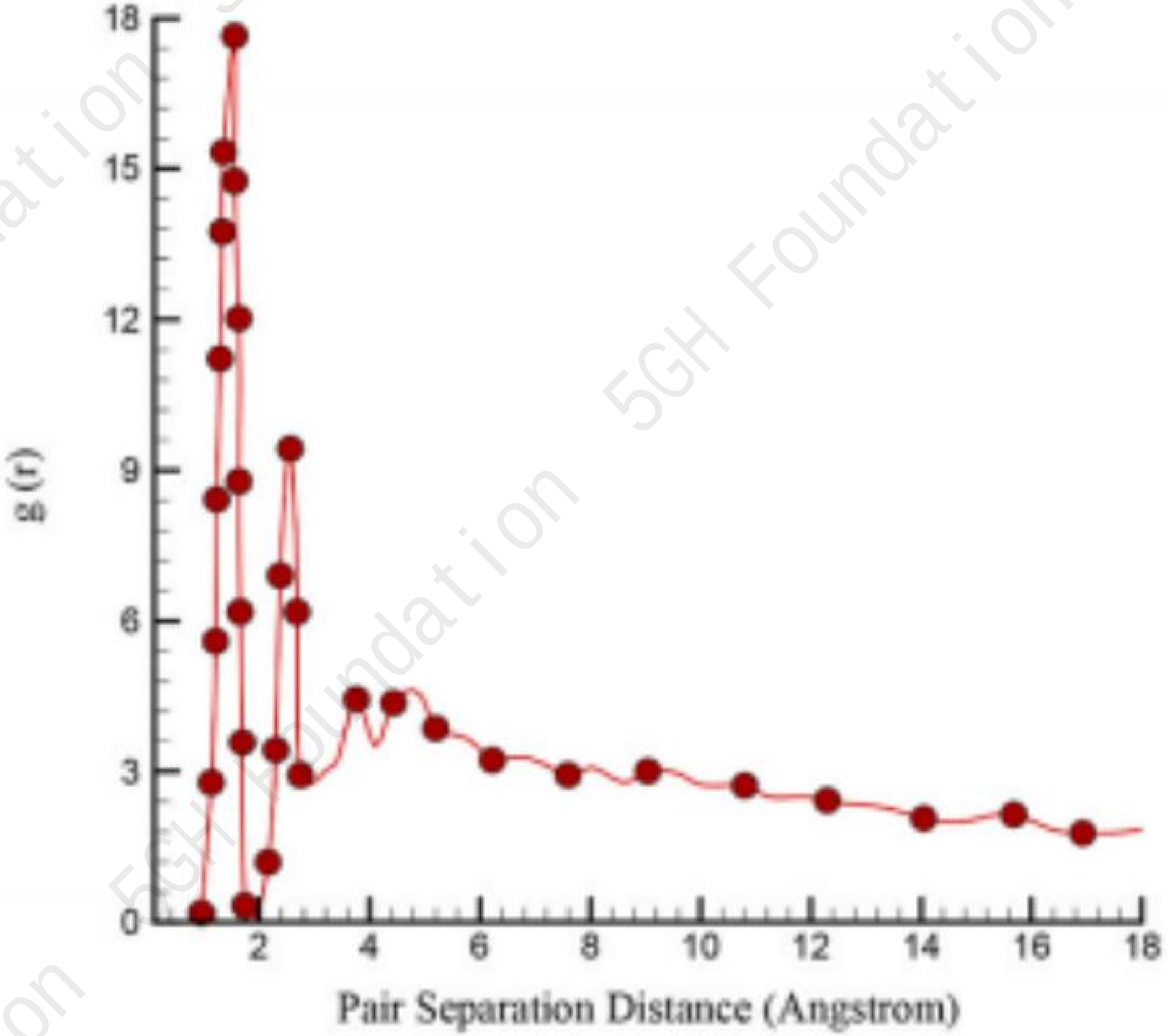


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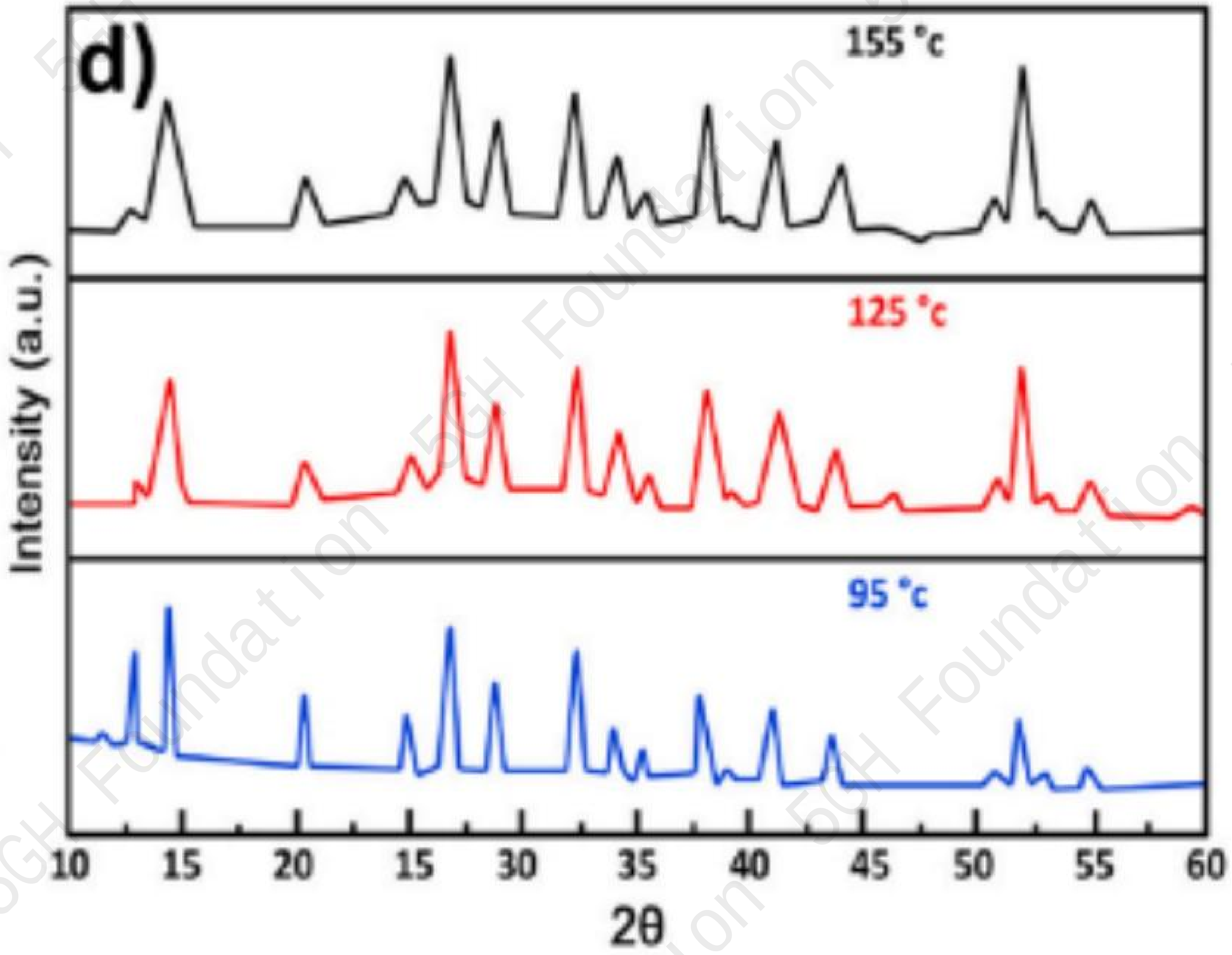
Figure 3 (d): abnormal XRD?



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10.1016/j.matchemphys.2023.128465
Figure 13 and 14 have same data

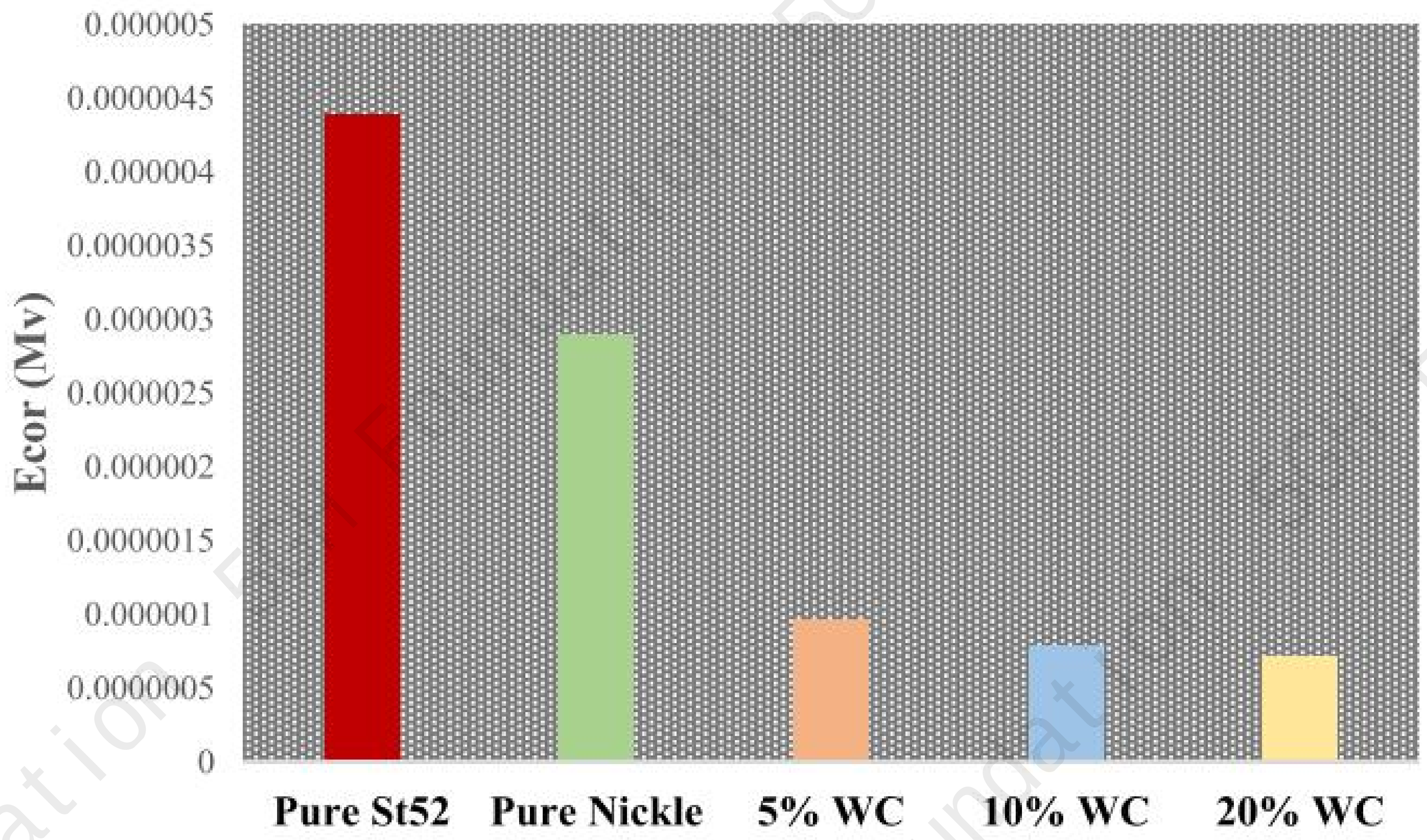

Fig. 13. Changing the corrosion potential of the pure and coated sample with various loading of WC.

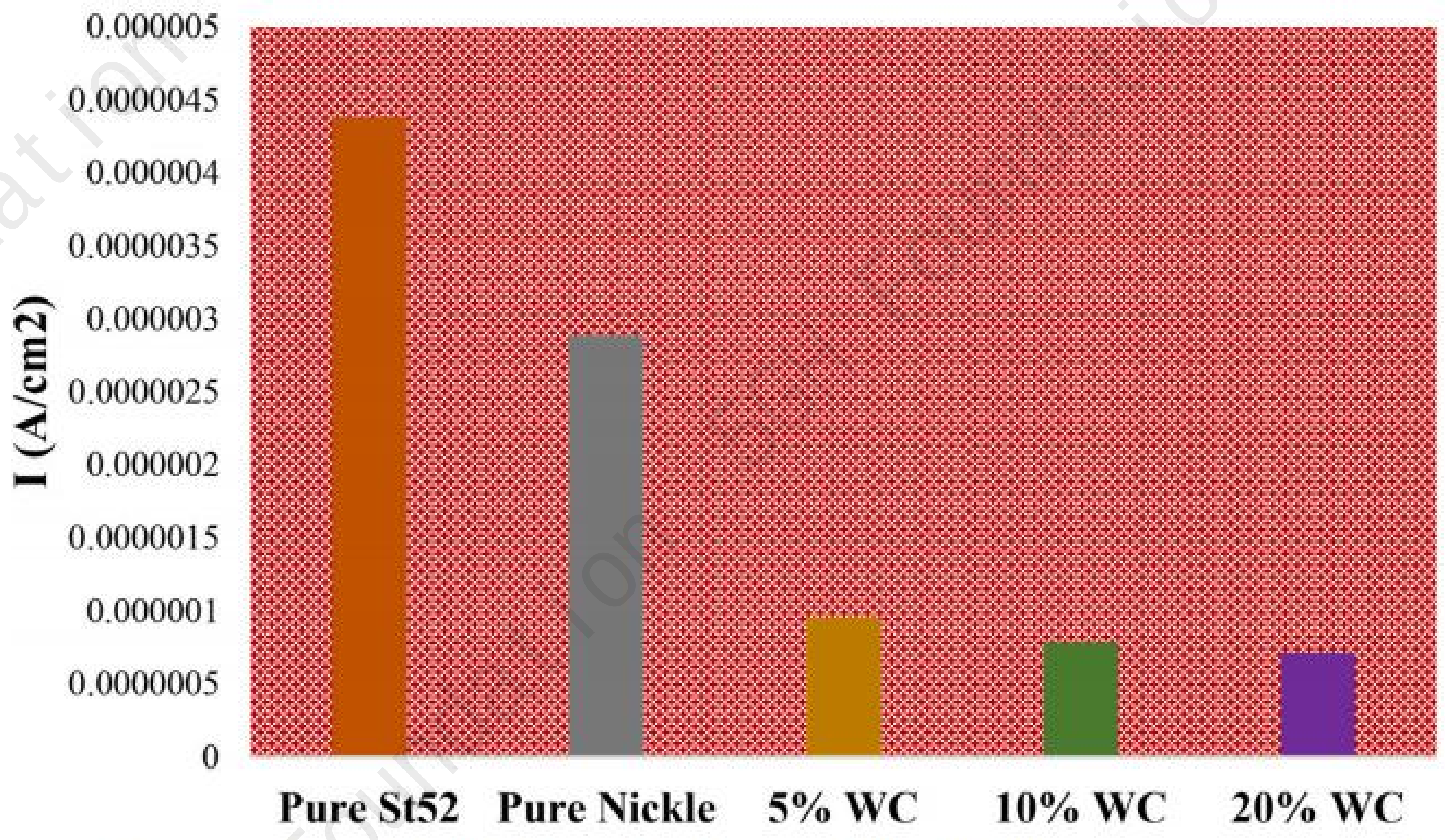

Fig. 14. Changing the corrosion current density in uncoated and coated samples with different percentages of reinforcing particles.

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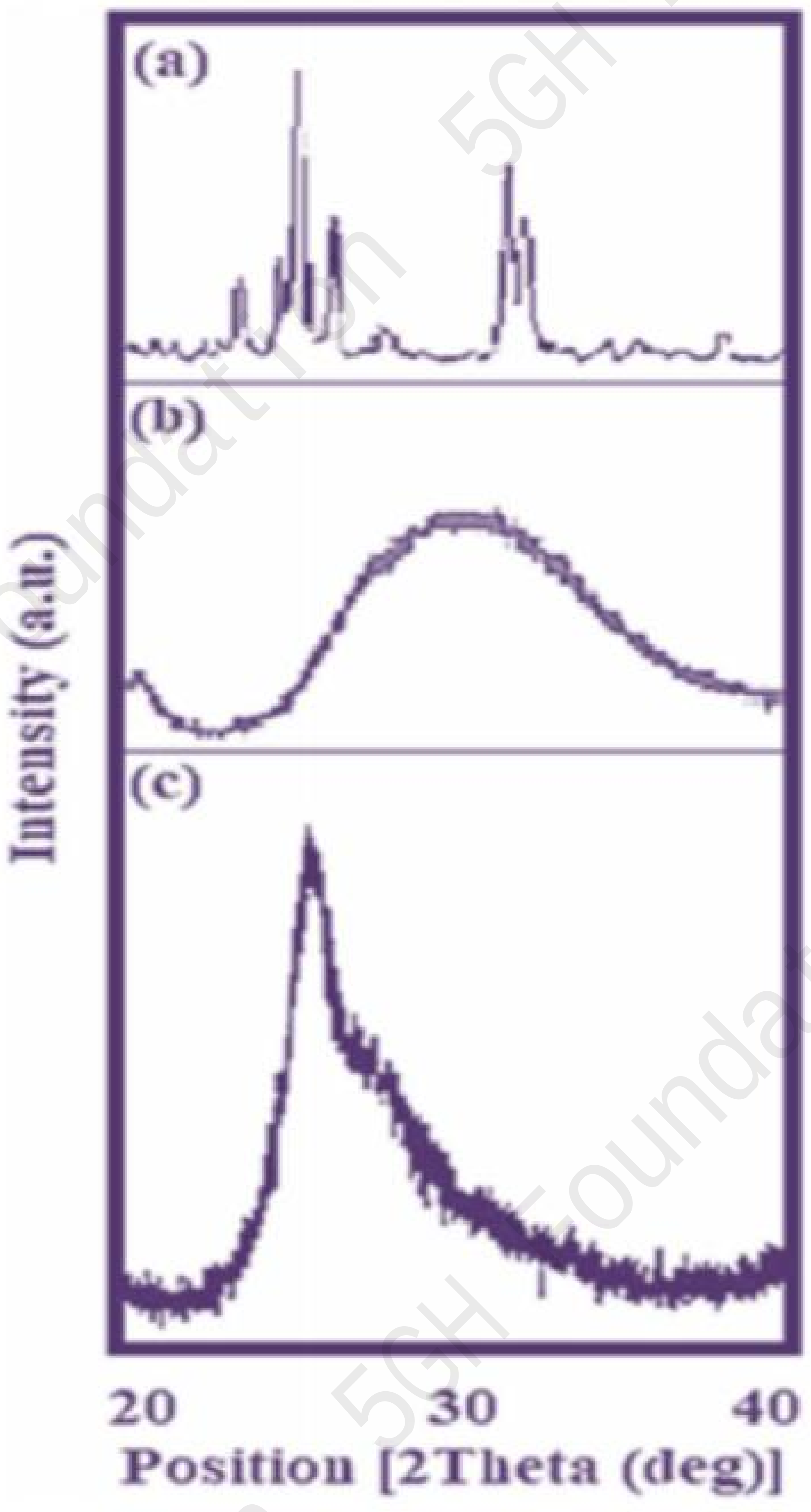
10.1016/j.matchemphys.2023.127855

Figure 1: broken XRD, Figure 5 and 6: error bars with same lengths



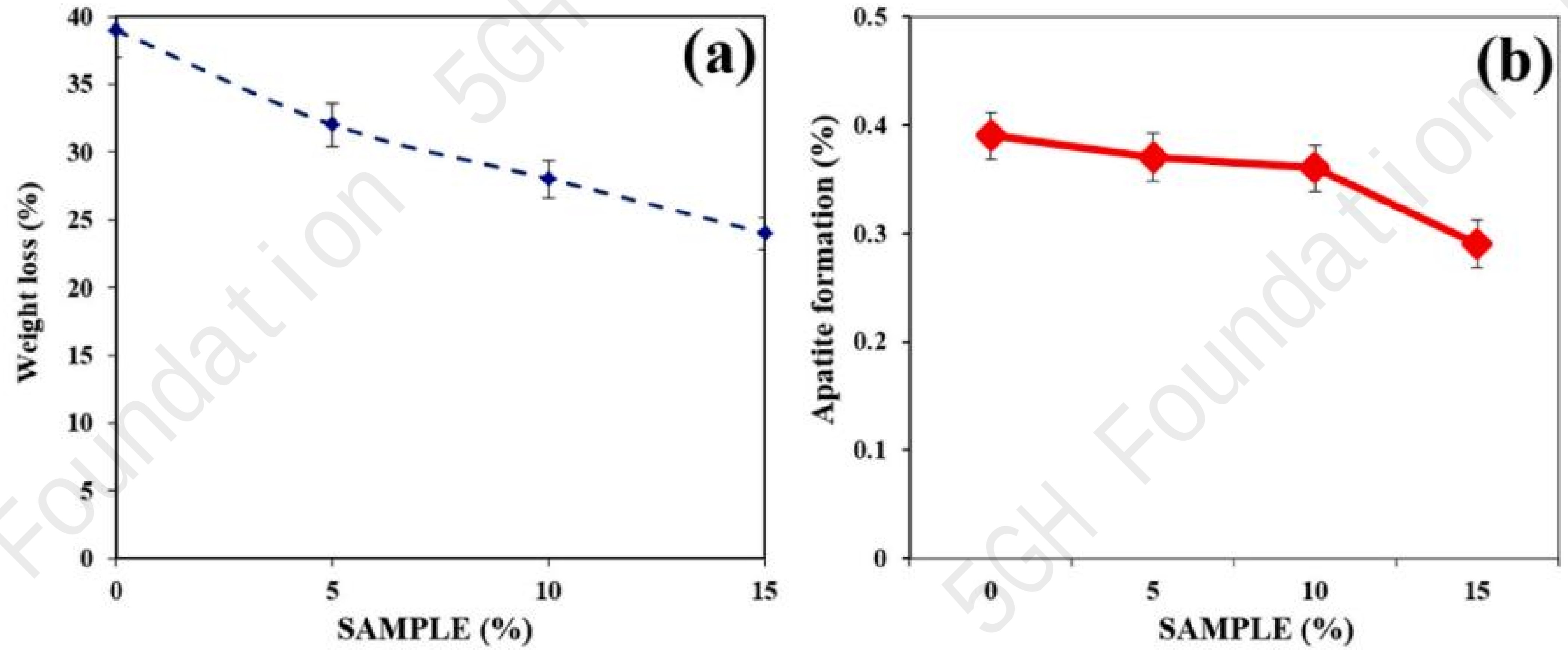


Fig. 5. Evaluation of weight loss and apatite growth results of nanocomposite scaffolds immersed in a SBF after 48 h in water bath.

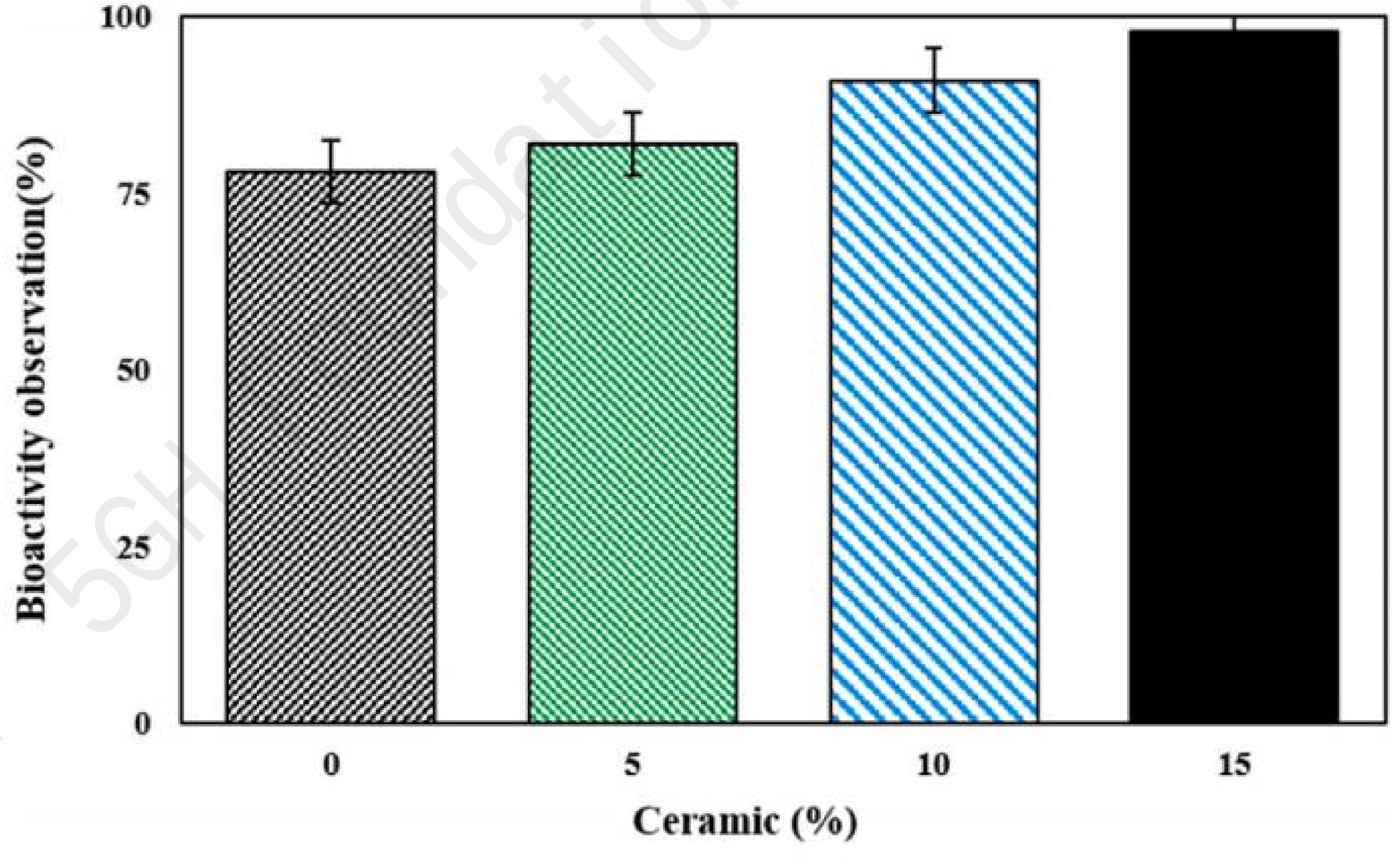


Fig. 6. Results of bioavailability using MTT results of cell growth of porous scaffolds.

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10.1016/j.matchemphys.2022.125770, Figure 4

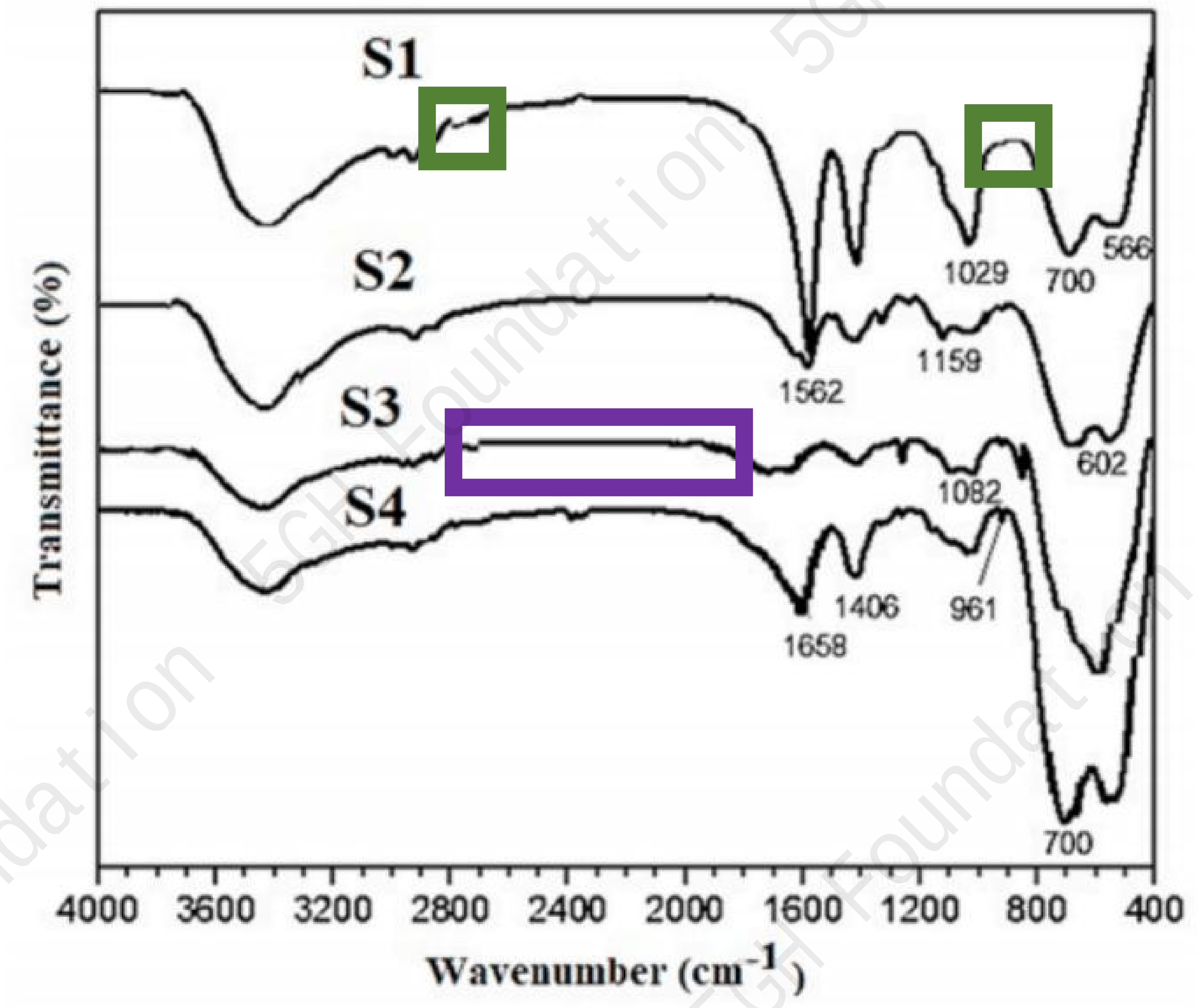

Fig. 4. FTIR spectroscopy of wounds containing 0, 5, 10 and 15 wt% of TiO_2.

Noise free?

Thinner than other parts?

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10.1016/j.matchemphys.2022.125770
Figure 7: error bars with same lengths

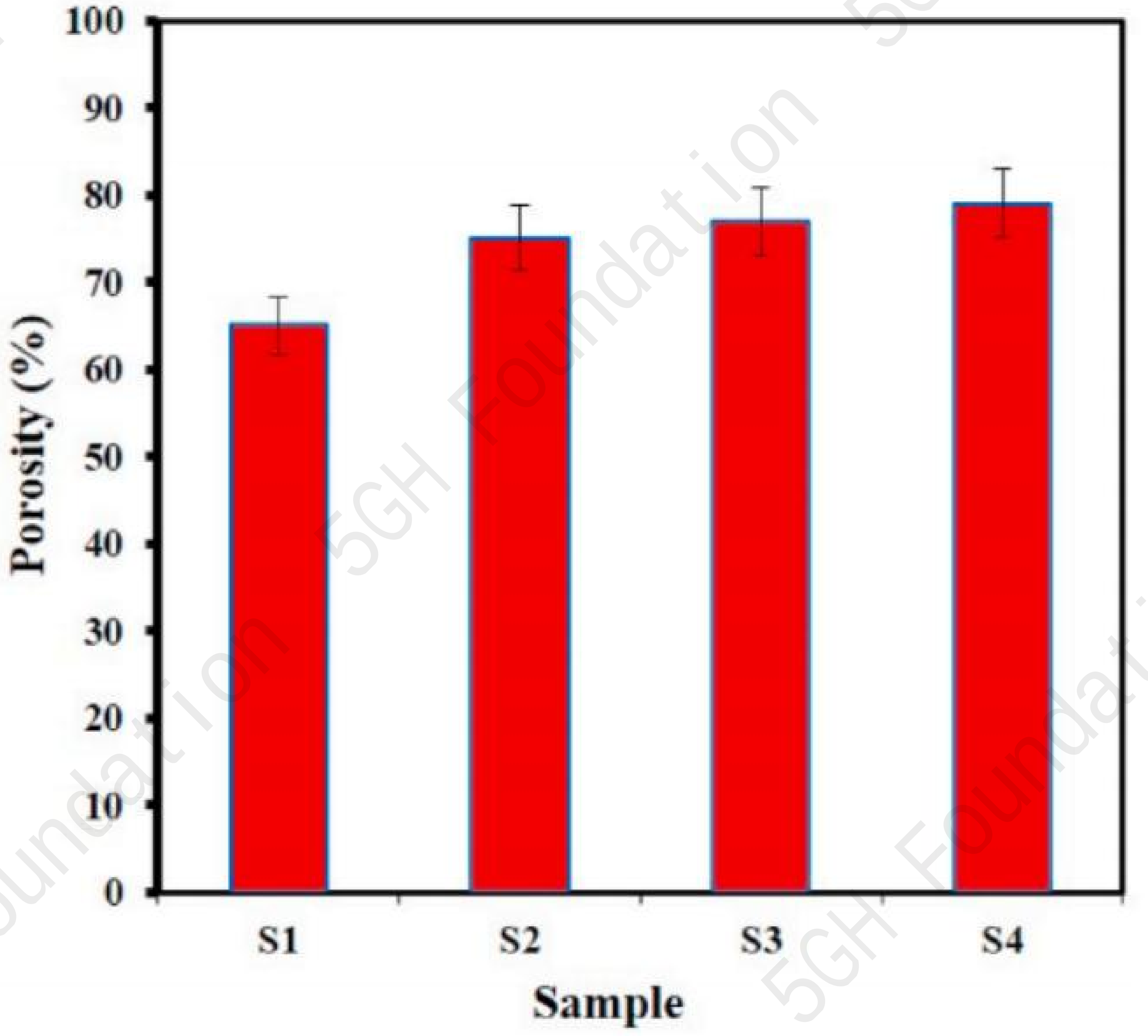

Fig. 7. Porosity percentages of samples containing 0, 5, 10 and 15 wt% of Ago-TiO_2.

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10.1016/j.matchemphys.2022.127157
Figure 4: most error bars have same lengths

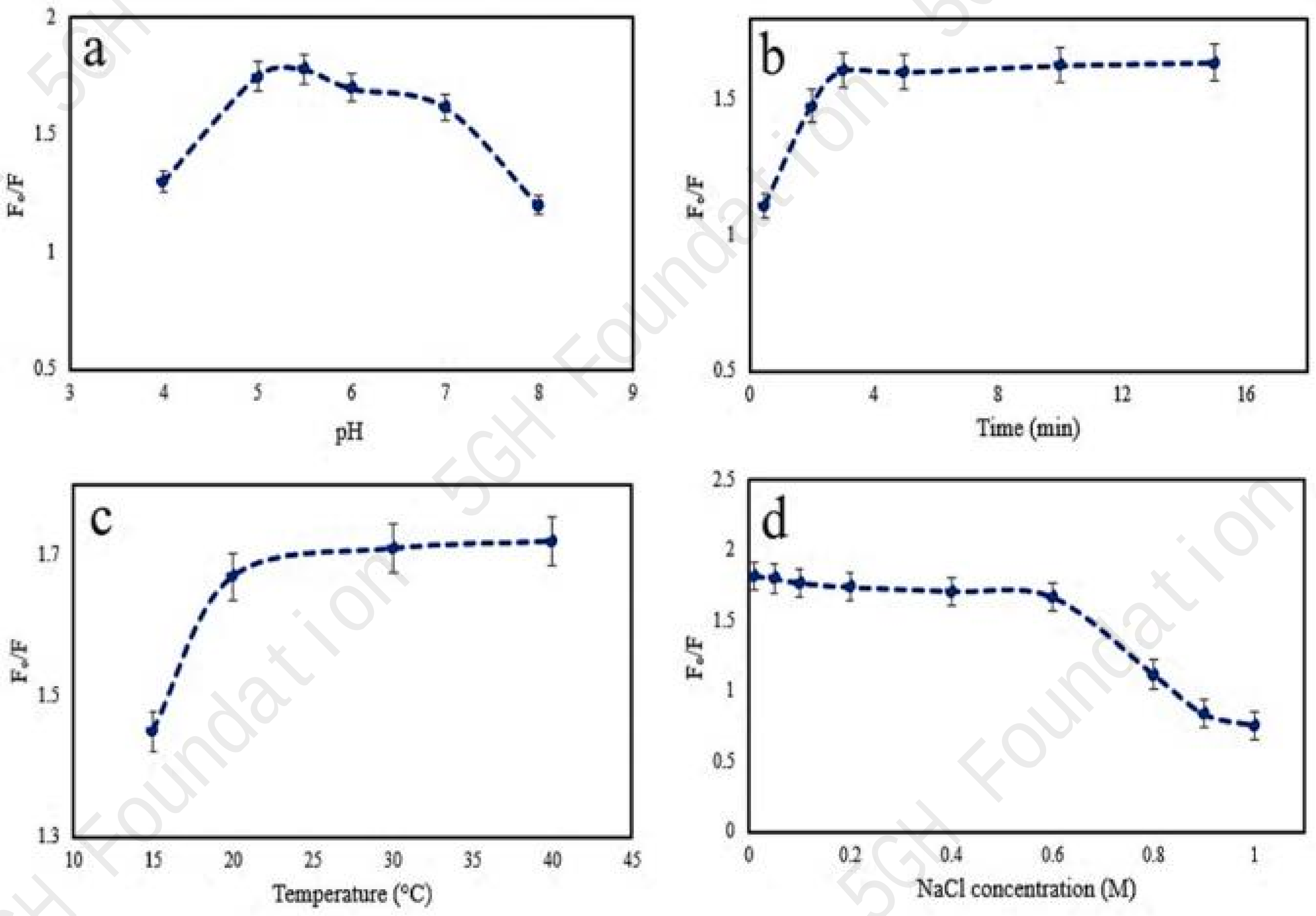

Fig. 4. The effect of (a) pH (Concentration: 30 μM, time: 5 min, temperature: 25 °C), (b) time (Concentration: 30 μM, pH: 5.5, temperature: 25 °C) (c) temperature (Concentration 30 μM, pH: 5.5, time: 3 min)and (d) ionic strength (Concentration: 30 μM, pH; 5.5, Time:3 min, temperature:25 °C) on the FL quenching response of HNT/MOF (IMA concentration, 30 μM). Results are the average of three replicates measurements.

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10.1016/j.matchemphys.2021.124720

Figure 2: most parts in the upper two lines are identical

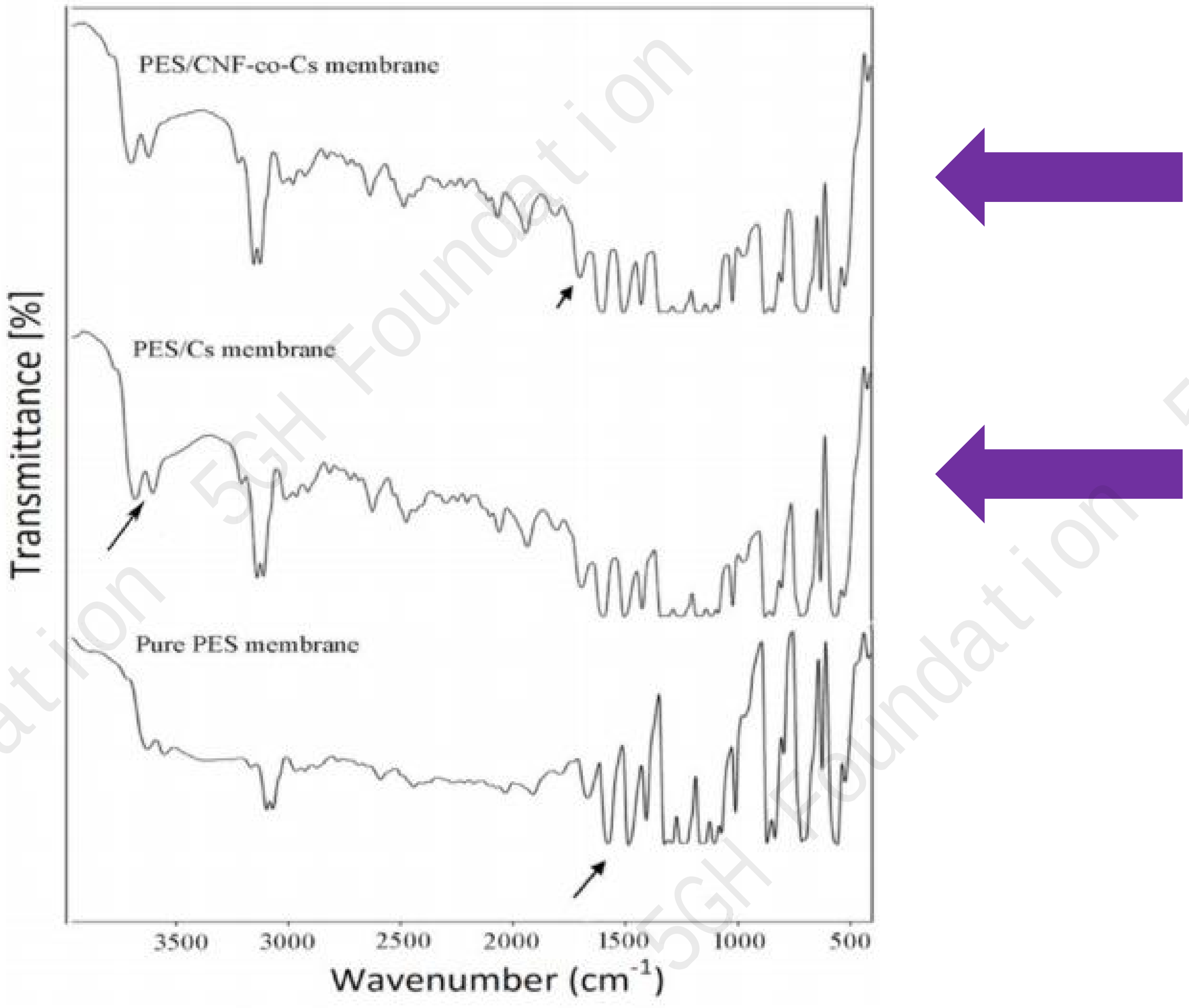

Fig. 2. The FTIR spectrum of PES membrane, PES/Cs and PES/CNFs-co-Cs membranes.

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10.1016/j.matchemphys.2021.124990
Figure 1: seems weird

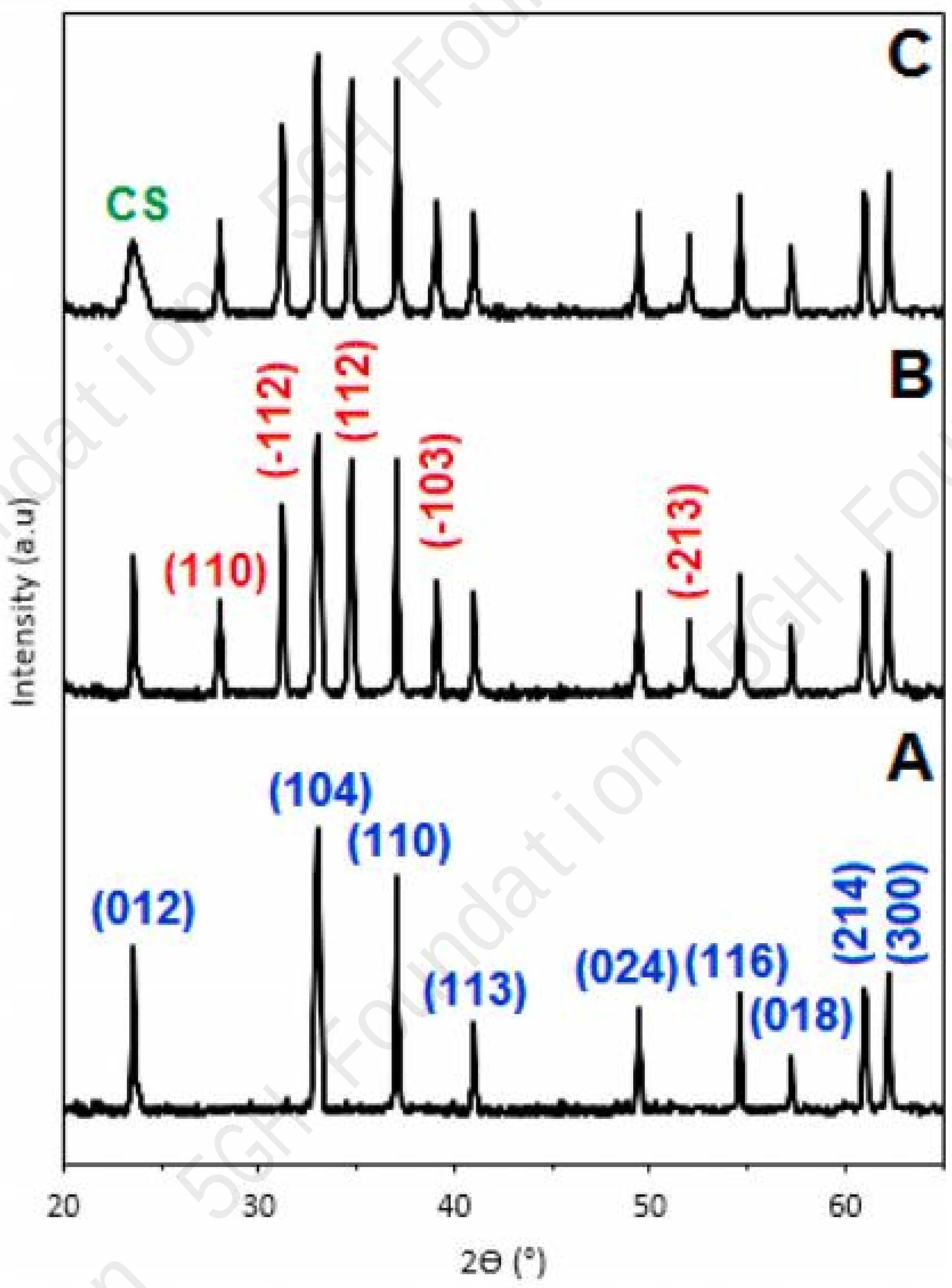

Fig. 1. XRD curves of NTO (A), AS/NTO (B), and AS/NTO/CS (C) nanocomposites.

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10.1016/j.matchemphys.2011.04.083
Table 1 and 2: same data for water?

Table 1
T1 relaxivity measurements for 4 concentration of dextran coated USPIO (sample D) and samples A, B and C.

$mg\ ml^{-1}$	0.015	0.008	0.004	0.002	Water
Sample A T1	257.3	483.1	1008.9	2130.4	2248.2
Sample B T1	110.4	183.0	302.1	497.5	2248.2
Sample C T1	125.4	234.5	420.9	891.3	2248.2
Sample D T1	253.0	527.1	102.7	2193.0	2248.2

Table 2
T2 relaxivity measurements for 4 concentration of dextran coated USPIO (sample D) and samples A, B and C.

$mg\ ml^{-1}$	0.015	0.008	0.004	0.002	Water
Sample A T2	19.8	23.0	55.2	201.2	389.9
Sample B T2	18.9	22.9	39.3	67.8	389.9
Sample C T2	18.0	30.4	58.8	112.7	389.9
Sample D T2	22 1	24.7	50.8	150.7	389.9

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10.1016/j.matchemphys.2019.122233
Table 2: same standard deviation

Table 2
Roughness parameters, coating thickness, and critical load of TiO_2–Al_2O_3-BTA and FG coatings.

Parameters	Coatings				Al2024
	TiO_2–Al_2O_3-BTA coating		FG coating		
Surface Roughness (nm)	4.1		4.4		217
Coating Thickness of each layer (nm)	Titania	300 ± 10 nm	Titania	300	–
	Ti–Al-2.4	2280 ± 10 nm	Ti–Al-1.2	373 ± 10 nm	–
			Ti–Al-2.4	575 ± 10 nm	–
			Ti–Al-3.6	592 ± 10 nm	–
			Ti–Al-4.8	610 ± 10 nm	–
Total Coating Thickness (nm)	2580 ± 10 nm		2465 ± 10 nm		–
Critical load (mN)	17		18		–

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Table 3: too small and same standard deviation

Table 3
Polarization analysis parameters and released Al after immersion for 1 h and 96 h in 3.5 wt% NaCl.

Sample	Immersion time (h)	(mV)	(mA/cm^2)	(mV/decade)	β_a (mV/decade)	Corrosion Rate (mm/year)	Al ($mg/L.cm^2$)	Efficiency (%)
AA2024-T3		−693 ± 1	15E-4	24	16	1.92E-3	3.6471	–
TiO_2–Al_2O_3-BTA	1	−862 ± 1	26E-6	42	77	5.75E-05	0.0142	97
FG coating		−824 ± 1	14E-6	38	13	2.45E-05	0.0037	98.6
AA2024-T3		−761 ± 1	17E-3	56	89	4.32E-04	8.5792	–
TiO_2–Al_2O_3-BTA	96	−753 ± 1	35E-6	25	22	3.12E-05	0.0836	92.8
FG coating		−713 ± 1	65E-7	47	73	2.32E-05	0.0059	94.5

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