Journal of the Serbian Chemical Society
JSCS-info@shd.org.rs • www.shd.org.rs/JSCS
J. Serb. Chem. Soc. 91 (2) S64–S65 (2026) *Supplementary material*

SUPPLEMENTARY MATERIAL TO

Composite materials based on biochar from coffee husk origin and nano zero-valent type Fe/Cu: Potential for treatment of water sources contaminated with As(V)

NGOC TOAN VU[1]*, ANH PHU NGUYEN[2], HONG SON NGUYEN[1], VIET ANH PHAM[1], DINH THAO VU[2] and QUANG MINH LE[3]

[1]*Institute of New Technology, 17, Hoang Sam, Nghia Do, Cau Giay, Hanoi, Vietnam,* [2]*Military Technical Academy, 236, Hoang Quoc Viet, Bac Tu Liem, Hanoi, Vietnam and* [3]*Hanoi–Amsterdam High School for the Gifted, 1, Hoang Minh Giam, Trung Hoa, Cau Giay, Hanoi, Vietnam*

J. Serb. Chem. Soc. 91 (2) (2026) 195–212

TABLE S-I. Results of experimental design using Box-Behnken

Run	Factor				As(V) removal efficiency
	X_1: pH	X_2: Time	X_3: CPS/As	X_4: %Metal/C	
	-	min	-	%	H (%)
1	3	100	1000	13	64.93
2	5	140	1250	14	89.04
3	5	60	1250	12	83.29
4	5	140	1250	12	91.64
5	5	140	750	12	88.64
6	5	140	750	14	58.94
7	5	60	750	14	49.55
8	5	60	1250	14	69.46
9	5	60	750	12	48.54
10	7	100	1000	13	81.34
11	7	100	1000	13	81.23
12	7	100	1000	15	64.33
13	7	100	1000	13	76.51
14	7	20	1000	13	37.87
15	7	100	1000	11	75.32
16	7	180	1000	13	89.82
17	7	100	1000	13	76.36
18	7	100	1000	13	76.76
19	7	100	1000	13	81.51
20	7	100	500	13	23.21

* Corresponding author. E-mail: vntoanchem@email.com

21	7	100	1500	13	80.41
22	9	140	1250	12	76.16
23	9	60	750	12	24.64
24	9	140	750	12	48.32
25	9	140	1250	14	70.91
26	9	60	750	14	31.26
27	9	140	750	14	50.34
28	9	60	1250	12	42.91
29	9	60	1250	14	59.5
30	11	100	1000	13	20.12