



Scopus

[Search](#) [Sources](#) [Lists](#) [SciVal ↗](#)



[Create account](#)

[Sign in](#)

[← Back to results](#) | 1 of 1

[↗ Export](#) [↓ Download](#) [🖨 Print](#) [✉ E-mail](#) [📄 Save to PDF](#) [★ Add to List](#) [More... >](#)

[Full Text](#)

Pollution • Volume 7, Issue 3, Pages 617 - 632 • June 2021

Document type

Article

Source type

Journal

ISSN

2383451X

DOI

10.22059/POLL.2021.320645.1034

Publisher

University of Tehran

Original language

English

[View less](#) [^](#)

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)

Related documents

Role of electrocoagulation in wastewater treatment: A developmental review


Tahreen, A. , Jami, M.S. , Ali, F. (2020) *Journal of Water Process Engineering*


Continuous flow sequencing bed biofilm reactor bio-digested landfill leachate treatment using electrocoagulation-persulfate

Dan, N.H. , Le Luu, T. (2021) *Journal of Environmental Management*

Effect of polarity shift on the performance of

Promising potential of electro-coagulation process for effective treatment of biotreated palm oil mill effluents


Tahreen A.^a, Jami M.S.^a  , Ali F.^a, Yasin N.M.F.M.^b, Ngabura M.^c

 Save all to author list

^a Department of Biotechnology Engineering, Faculty of Engineering, International Islamic University Malaysia, P.O Box 10, Kuala Lumpur, 50728, Malaysia

^b Processing & Engineering, Sime Darby Plantation Research Sdn Bhd, Selangor, 42960, Malaysia

^c Department of Chemical and Environmental Engineering, Faculty of Engineering, University Putra Malaysia, Serdang Selangor, 43400, Malaysia

Full text options 

[Abstract](#)

[Author keywords](#)

[Reaxys Chemistry database information](#)

[SciVal Topics](#)

[Metrics](#)

[Funding details](#)

Abstract

The critical parameters namely initial pH, time and current density largely impact the process efficiency of electrocoagulation (EC). Few works have been done on observing the interaction of these

electrocoagulation process for the treatment of produced water

Madhavan, M.A. , Antony, S.P. (2021) *Chemosphere*

[View all related documents based on references](#)

[Find more related documents in Scopus based on:](#)

[Authors >](#) [Keywords >](#)

critical parameters and the possible combined effect on the overall pollutant removal efficiency. Therefore, the knowledge of the combined effect of critical parameter interaction would enhance the optimization of EC parameters to attain maximum efficiency with limited resources. Using aluminium electrodes with interelectrode distance of 10 mm on synthetic wastewater, representing biotreated palm oil mill effluent (BPOME), with a set range of initial pH, current density, and time of 3-8, 40-160 mA/cm² and 15 to 60 minutes, respectively, the effect of the three critical variables was investigated. The optimum Chemical Oxygen Demand (COD) removal of 71.5% was determined at pH 6, current density of 160 mA/cm² (with current 1.75 A) at EC time of 15 minutes. The experiment was validated with real BPOME, resulting in the removal efficiency of 60.7 % COD, 99.91 % turbidity, 100 % total suspended solids (TSS) and 95.7 % colour. Removal of a large quantity of pollutants in a time span of 15 minutes with optimized parameters in EC is notable for a wastewater treatment alternative that requires no extensive use of chemicals. The interaction of parameters observed in this study indicated a synergistic contribution of initial pH and current density in removing maximum wastewater COD in 15 minutes of EC. © University of Tehran

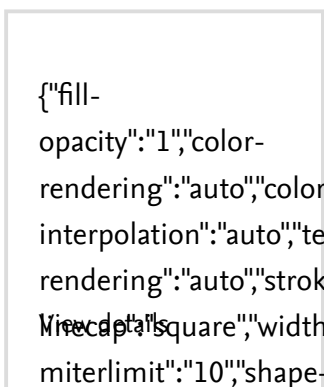
Author keywords

Industrial effluent ; Optimization; Parameter interaction; Wastewater treatment

Reaxys Chemistry database information [i](#)

Substances

[View all substances \(1\)](#)






References (55)


[View in search results format >](#)

All

[Export](#)

 [Print](#)

 [E-mail](#)

 [Save to PDF](#)

[Create bibliography](#)

1 Abdulazeez, Q.M., Jami, M.S., Alam, M.Z.

Feasibility of using kaolin suspension as synthetic sludge sample

(2018) *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*, 48 (1), pp. 25-39. Cited 2 times.

http://www.akademiabaru.com/doc/ARFMTSV48_N1_P25_39.pdf

2 Akarsu, C., Ozay, Y., Dizge, N., Gulsen, H.E., Ates, H., Gozmen, B., Turabik, M.

Electrocoagulation and nanofiltration integrated process application in purification of bilge water using response surface methodology

(2016) *Water Science and Technology*, 74 (3), pp. 564-579. Cited 15 times.

<http://wst.iwaponline.com/content/74/3/564.full.pdf>

doi: 10.2166/wst.2016.168

[View at Publisher](#)

- 3 Akhtar, A., Aslam, Z., Asghar, A., Bello, M.M., Raman, A.A.A.
Electrocoagulation of Congo Red dye-containing wastewater:
Optimization of operational parameters and process
mechanism

(2020) *Journal of Environmental Chemical Engineering*, 8 (5), art. no.
104055. Cited 19 times.
[http://www.journals.elsevier.com/journal-of-environmental-chemical-
engineering/](http://www.journals.elsevier.com/journal-of-environmental-chemical-engineering/)
doi: 10.1016/j.jece.2020.104055

View at Publisher
-
- 4 Amosa, M.K., Jami, M.S., Alkhatib, M.F.R., Majozi, T.
Studies on pore blocking mechanism and technical feasibility
of a hybrid PAC-MF process for reclamation of irrigation
water from biotreated POME

(2016) *Separation Science and Technology (Philadelphia)*, 51 (12), pp. 2047-
2061. Cited 12 times.
www.tandf.co.uk/journals/titles/01496395.asp
doi: 10.1080/01496395.2016.1192192

View at Publisher
-
- 5 (2002) *American Water Works Association, Water Environment Federation;
Stand. Methods Exam. Water Wastewater*
APHA, American Public Health Association
-

- 6 Aslan, A.K.H.N., Ali, M.D.M., Morad, N.A., Tamunaidu, P.
Polyhydroxyalkanoates production from waste biomass
([Open Access](#))

(2016) *IOP Conference Series: Earth and Environmental Science*, 36 (1), art. no. 012040. Cited 18 times.

<http://www.iop.org/EJ/volume/1755-1315>

doi: 10.1088/1755-1315/36/1/012040

[View at Publisher](#)

- 7 Aswathy, P., Gandhimathi, R., Ramesh, S.T., Nidheesh, P.V.
Removal of organics from bilge water by batch electrocoagulation process

(2016) *Separation and Purification Technology*, 159, pp. 108-115. Cited 80 times.

<http://www.journals.elsevier.com/separation-and-purification-technology/>

doi: 10.1016/j.seppur.2016.01.001

[View at Publisher](#)

- 8 Bahadur, N., Bhargava, N.
Novel pilot scale photocatalytic treatment of textile & dyeing industry wastewater to achieve process water quality and enabling zero liquid discharge

(2019) *Journal of Water Process Engineering*, 32, art. no. 100934. Cited 20 times.

<http://www.journals.elsevier.com/journal-of-water-process-engineering/>

doi: 10.1016/j.jwpe.2019.100934

[View at Publisher](#)

- 9 Bannari, R., Hilali, Y., Essadki, A., Bannari, A.
Computational fluid dynamic for improving design and performance of an external loop airlift reactor used in electrochemical wastewater treatment ([Open Access](#))

(2019) *SN Applied Sciences*, 1 (11), art. no. 1497.
[springer.com/snasc](https://www.springer.com/snasc)
doi: 10.1007/s42452-019-1523-z

View at Publisher
-
- 10 Bashir, M.J., Lim, J.H., Abu Amr, S.S., Wong, L.P., Sim, Y.L.
Post treatment of palm oil mill effluent using electro-coagulation-peroxidation (ECP) technique

(2019) *Journal of Cleaner Production*, 208, pp. 716-727. Cited 32 times.
<https://www.journals.elsevier.com/journal-of-cleaner-production>
doi: 10.1016/j.jclepro.2018.10.073

View at Publisher
-
- 11 Boczkaj, G., Fernandes, A.
Wastewater treatment by means of advanced oxidation processes at basic pH conditions: A review

(2017) *Chemical Engineering Journal*, 320, pp. 608-633. Cited 512 times.
www.elsevier.com/inca/publications/store/6/0/1/2/7/3/index.html
doi: 10.1016/j.cej.2017.03.084

View at Publisher
-

- 12 Chavalparit, O., Ongwandee, M.
Optimizing electrocoagulation process for the treatment of biodiesel wastewater using response surface methodology
(2009) *Journal of Environmental Sciences*, 21 (11), pp. 1491-1496. Cited 129 times.
doi: 10.1016/S1001-0742(08)62445-6
View at Publisher
-
- 13 Deveci, E.Ü., Akarsu, C., Gönen, Ç., Özey, Y.
Enhancing treatability of tannery wastewater by integrated process of electrocoagulation and fungal via using RSM in an economic perspective
(2019) *Process Biochemistry*, 84, pp. 124-133. Cited 16 times.
www.elsevier.com/inca/publications/store/4/2/2/8/5/7
doi: 10.1016/j.procbio.2019.06.016
View at Publisher
-
- 14 Dimoglo, A., Sevim-Elibol, P., Dinç, Ö., Gökmen, K., Erdoğan, H.
Electrocoagulation/electroflotation as a combined process for the laundry wastewater purification and reuse
(2019) *Journal of Water Process Engineering*, 31, art. no. 100877. Cited 25 times.
<http://www.journals.elsevier.com/journal-of-water-process-engineering/>
doi: 10.1016/j.jwpe.2019.100877
View at Publisher
-

- 15 El-Ashtoukhy, E.-S.Z., Amin, N.K., Abdelwahab, O.
Removal of lead (II) and copper (II) from aqueous solution
using pomegranate peel as a new adsorbent

(2008) *Desalination*, 223 (1-3), pp. 162-173. Cited 392 times.
doi: 10.1016/j.desal.2007.01.206

[View at Publisher](#)

- 16 Foudhaili, T., Lefebvre, O., Coudert, L., Neculita, C.M.
Sulfate removal from mine drainage by electrocoagulation as
a stand-alone treatment or polishing step

(2020) *Minerals Engineering*, 152, art. no. 106337. Cited 6 times.
<http://www.journals.elsevier.com/minerals-engineering/>
doi: 10.1016/j.mineng.2020.106337

[View at Publisher](#)

- 17 Fukui, Y., Yuu, S.
Removal of colloidal particles in electroflotation

(1985) *AIChE Journal*, 31 (2), pp. 201-208. Cited 35 times.
doi: 10.1002/aic.690310205

[View at Publisher](#)

- 18 Garcia-Segura, S., Eiband, M.M.S.G., de Melo, J.V., Martínez-Huitle, C.A.
Electrocoagulation and advanced electrocoagulation processes: A general review about the fundamentals, emerging applications and its association with other technologies (Open Access)

(2017) *Journal of Electroanalytical Chemistry*, 801, pp. 267-299. Cited 259 times.

doi: 10.1016/j.jelechem.2017.07.047

View at Publisher

- 19 Ghernaout, D., Ghernaout, B., Boucherit, A., Naceur, M.W., Khelifa, A., Kellil, A.

Study on mechanism of electrocoagulation with iron electrodes in idealised conditions and electrocoagulation of humic acids solution in batch using aluminium electrodes

(2009) *Desalination and Water Treatment*, 8 (1-3), pp. 91-99. Cited 31 times.

<http://www.deswater.com/readpaper.php?id=290>

doi: 10.5004/dwt.2009.668

View at Publisher

- 20 Ghernaout, D., Al-Ghonamy, A.I., Ait Messaoudene, N., Aichouni, M., Naceur, M.W., Benchelighem, F.Z., Boucherit, A.

Electrocoagulation of Direct Brown 2 (DB) and BF Cibacete Blue (CB) Using Aluminum Electrodes

(2015) *Separation Science and Technology (Philadelphia)*, 50 (9), pp. 1413-1420. Cited 8 times.

www.tandf.co.uk/journals/titles/01496395.asp

doi: 10.1080/01496395.2014.982763

View at Publisher

- 21 Hashim, K.S., Al Khaddar, R., Jasim, N., Shaw, A., Phipps, D., Kot, P., Pedrola, M.O., (...), Alawsh, R.

Electrocoagulation as a green technology for phosphate removal from river water ([Open Access](#))

(2019) *Separation and Purification Technology*, 210, pp. 135-144. Cited 108 times.

<http://www.journals.elsevier.com/separation-and-purification-technology/>
doi: 10.1016/j.seppur.2018.07.056

[View at Publisher](#)

- 22 Holt, P.K., Barton, G.W., Wark, M., Mitchell, C.A.

A quantitative comparison between chemical dosing and electrocoagulation

(2002) *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 211 (2-3), pp. 233-248. Cited 451 times.

www.elsevier.com/locate/colsurfa
doi: 10.1016/S0927-7757(02)00285-6

[View at Publisher](#)

- 23 Hussin, F., Abnisa, F., Issabayeva, G., Aroua, M.K.

Removal of lead by solar-photovoltaic electrocoagulation using novel perforated zinc electrode

(2017) *Journal of Cleaner Production*, 147, pp. 206-216. Cited 39 times.
doi: 10.1016/j.jclepro.2017.01.096

[View at Publisher](#)

- 24 Ilyas, A., Mertens, M., Oyaert, S., Vankelecom, I.F.J.
Synthesis of patterned PVDF ultrafiltration membranes:
Spray-modified non-solvent induced phase separation
(Open Access)
- (2020) *Journal of Membrane Science*, 612, art. no. 118383. Cited 17 times.
www.elsevier.com/locate/memsci
doi: 10.1016/j.memsci.2020.118383

[View at Publisher](#)

- 25 Iskandar, M.J., Baharum, A., Anuar, F.H., Othaman, R.
Palm oil industry in South East Asia and the effluent
treatment technology—A review
- (2018) *Environmental Technology and Innovation*, 9, pp. 169-185. Cited 93
times.
<http://www.journals.elsevier.com/environmental-technology-and-innovation/>
doi: 10.1016/j.eti.2017.11.003

[View at Publisher](#)

- 26 Jawad, A.H., Rashid, R.A., Ishak, M.A.M., Wilson, L.D.
Adsorption of methylene blue onto activated carbon
developed from biomass waste by H₂SO₄ activation: kinetic,
equilibrium and thermodynamic studies
- (2016) *Desalination and Water Treatment*, 57 (52), pp. 25194-25206. Cited 84
times.
<http://www.deswater.com/openaccess.php>
doi: 10.1080/19443994.2016.1144534

[View at Publisher](#)

-
- 27 Jayakaran, P., Nirmala, G.S., Govindarajan, L.
Qualitative and Quantitative Analysis of Graphene-Based Adsorbents in Wastewater Treatment ([Open Access](#))

(2019) *International Journal of Chemical Engineering*, 2019, art. no. 9872502. Cited 8 times.

<http://www.hindawi.com/journals/ijce/>

doi: 10.1155/2019/9872502

[View at Publisher](#)

- 28 Khosravi, R., Hossini, H., Heidari, M., Fazlzadeh, M., Biglari, H., Taghizadeh, A., Barikbin, B.

Electrochemical decolorization of reactive dye from synthetic wastewater by mono-polar aluminum electrodes system

(2017) *International Journal of Electrochemical Science*, 12 (6), pp. 4745-4755. Cited 20 times.

<http://www.electrochemsci.org/papers/vol12/120604745.pdf>

doi: 10.20964/2017.06.75

[View at Publisher](#)

- 29 Kobya, M., Hiz, H., Senturk, E., Aydiner, C., Demirbas, E.

Treatment of potato chips manufacturing wastewater by electrocoagulation

(2006) *Desalination*, 190 (1-3), pp. 201-211. Cited 252 times.

doi: 10.1016/j.desal.2005.10.006

[View at Publisher](#)

- 30 Lekhlif, B., Oudrhiri, L., Zidane, F., Drogui, P., Blais, J.F.
Study of the electrocoagulation of electroplating industry wastewaters charged by nickel (II) and chromium (VI)

(2014) *Journal of Materials and Environmental Science*, 5 (1), pp. 111-120. Cited 36 times.
http://www.jmaterenvironsci.com/Document/vol5/vol5_N1/13-JMES-510-2014-Lekhlif.pdf
-

- 31 Loukanov, A., El Allaoui, N., Omor, A., Elmadani, F.Z., Bouayad, K., Nakabayashi, S.
Large-scale removal of colloidal contaminants from artisanal wastewater by bipolar electrocoagulation with aluminum sacrificial electrodes (Open Access)

(2020) *Results in Chemistry*, 2, art. no. 100038. Cited 7 times.
www.journals.elsevier.com/results-in-chemistry
doi: 10.1016/j.rechem.2020.100038

[View at Publisher](#)

- 32 Manilal, A.M., Soloman, P.A., Basha, C.A.
Removal of Oil and Grease from Produced Water Using Electrocoagulation

(2020) *Journal of Hazardous, Toxic, and Radioactive Waste*, 24 (1), art. no. 04019023. Cited 13 times.
<http://ascelibrary.org/hzo/>
doi: 10.1061/(ASCE)HZ.2153-5515.0000463

[View at Publisher](#)

- 33 McBeath, S.T., Nouri-Khorasani, A., Mohseni, M., Wilkinson, D.P.
In-situ determination of current density distribution and fluid modeling of an electrocoagulation process and its effects on natural organic matter removal for drinking water treatment

(2020) *Water Research*, 171, art. no. 115404. Cited 12 times.

www.elsevier.com/locate/watres

doi: 10.1016/j.watres.2019.115404

[View at Publisher](#)

- 34 Mohd-Nor, D., Ramli, N., Sharuddin, S.S., Hassan, M.A., Mustapha, N.A., Ariffin, H., Sakai, K., (...), Maeda, T.

Dynamics of microbial populations responsible for biodegradation during the full-scale treatment of palm oil mill effluent ([Open Access](#))

(2019) *Microbes and Environments*, 34 (2), pp. 121-128. Cited 10 times.

https://www.jstage.jst.go.jp/article/jsme2/34/2/34_ME18104/_pdf

doi: 10.1264/jsme2.ME18104

[View at Publisher](#)

- 35 Moussa, D.T., El-Naas, M.H., Nasser, M., Al-Marri, M.J.

A comprehensive review of electrocoagulation for water treatment: Potentials and challenges

(2017) *Journal of Environmental Management*, Part 1 186, pp. 24-41. Cited 314 times.

<http://www.elsevier.com/inca/publications/store/6/2/2/8/7/1/index.htm>

doi: 10.1016/j.jenvman.2016.10.032

[View at Publisher](#)

- 36 Naje, A.S., Chelliapan, S., Zakaria, Z., Ajeel, M.A., Alaba, P.A.
A review of electrocoagulation technology for the treatment of textile wastewater

(2017) *Reviews in Chemical Engineering*, 33 (3), pp. 263-292. Cited 68 times.
<http://www.reference-global.com/loi/revce>
doi: 10.1515/revce-2016-0019

View at Publisher
-

- 37 Nasrullah, M., Singh, L., Krishnan, S., Sakinah, M., Mahapatra, D.M., Zularisam, A.W.
Electrocoagulation treatment of raw palm oil mill effluent: Effect of operating parameters on floc growth and structure

(2020) *Journal of Water Process Engineering*, 33, art. no. 101114. Cited 10 times.
<http://www.journals.elsevier.com/journal-of-water-process-engineering/>
doi: 10.1016/j.jwpe.2019.101114

View at Publisher
-

- 38 Nasrullah, M., Singh, L., Mohamad, Z., Norsita, S., Krishnan, S., Wahida, N., Zularisam, A.W.
Treatment of palm oil mill effluent by electrocoagulation with presence of hydrogen peroxide as oxidizing agent and polialuminum chloride as coagulant-aid (Open Access)

(2017) *Water Resources and Industry*, 17, pp. 7-10. Cited 46 times.
<http://www.journals.elsevier.com/water-resources-and-industry/>
doi: 10.1016/j.wri.2016.11.001

View at Publisher
-

-
- 39 Nopens, I., Capalozza, C., Vanrolleghem, P. A.
(2001) *Stability analysis of a synthetic municipal wastewater*. Cited 78 times.
Dissertation, Ghent University
-

- 40 Reilly, M., Cooley, A.P., Tito, D., Tassou, S.A., Theodorou, M.K.
Electrocoagulation treatment of dairy processing and
slaughterhouse wastewaters ([Open Access](#))

(2019) *Energy Procedia*, 161, pp. 343-351. Cited 28 times.
<http://www.sciencedirect.com/science/journal/18766102>
doi: 10.1016/j.egypro.2019.02.106

[View at Publisher](#)

- 41 Rusdianasari, Taqwa, A., Jaksen, Syakdani, A.
Treatment optimization of electrocoagulation (EC) in purifying
palm oil mill effluents (POMEs) ([Open Access](#))

(2017) *Journal of Engineering and Technological Sciences*, 49 (5), pp. 604-
617. Cited 9 times.
<http://journals.itb.ac.id/index.php/jets/article/download/6383/3087>
doi: 10.5614/j.eng.technol.sci.2017.49.5.4

[View at Publisher](#)

- 42 Sandoval, M.A., Fuentes, R., Thiam, A., Salazar, R.
Arsenic and fluoride removal by electrocoagulation process: A general review

(2021) *Science of the Total Environment*, 753, art. no. 142108. Cited 24 times.
www.elsevier.com/locate/scitotenv
doi: 10.1016/j.scitotenv.2020.142108

View at Publisher

- 43 Sardari, K., Fyfe, P., Lincicome, D., Wickramasinghe, S.R.
Aluminum electrocoagulation followed by forward osmosis for treating hydraulic fracturing produced waters

(2018) *Desalination*, 428, pp. 172-181. Cited 51 times.
doi: 10.1016/j.desal.2017.11.030

View at Publisher

- 44 Sediqi, S., Bazargan, A., Mirbagheri, S.A.
Consuming the least amount of energy and resources in landfill leachate electrocoagulation

(2021) *Environmental Technology and Innovation*, 22, art. no. 101454. Cited 4 times.
<http://www.journals.elsevier.com/environmental-technology-and-innovation/>
doi: 10.1016/j.eti.2021.101454

View at Publisher

- 45 Sekar, M., Sakthi, V., Rengaraj, S.
Kinetics and equilibrium adsorption study of lead(II) onto activated carbon prepared from coconut shell

(2004) *Journal of Colloid and Interface Science*, 279 (2), pp. 307-313. Cited 521 times.
doi: 10.1016/j.jcis.2004.06.042

[View at Publisher](#)

- 46 Shankar, R., Singh, L., Mondal, P., Chand, S.
Removal of COD, TOC, and color from pulp and paper industry wastewater through electrocoagulation

(2014) *Desalination and Water Treatment*, 52 (40-42), pp. 7711-7722. Cited 42 times.
<http://www.tandfonline.com/toc/tdwt20/current>
doi: 10.1080/19443994.2013.831782

[View at Publisher](#)

- 47 Sharma, S., Aygun, A., Simsek, H.
Electrochemical treatment of sunflower oil refinery wastewater and optimization of the parameters using response surface methodology

(2020) *Chemosphere*, 249, art. no. 126511. Cited 12 times.
www.elsevier.com/locate/chemosphere
doi: 10.1016/j.chemosphere.2020.126511

[View at Publisher](#)

- 48 Sher, F., Hanif, K., Iqbal, S.Z., Imran, M.
Implications of advanced wastewater treatment:
Electrocoagulation and electroflocculation of effluent
discharged from a wastewater treatment plant ([Open Access](#))
- (2020) *Journal of Water Process Engineering*, 33, art. no. 101101. Cited 48 times.
<http://www.journals.elsevier.com/journal-of-water-process-engineering/>
doi: 10.1016/j.jwpe.2019.101101
- [View at Publisher](#)
-

- 49 Tahreen, A., Jami, M. S.
Advances in antifouling strategies in membrane ultrafiltration: A brief review
(2021) *J. Adv. Res. Mater. Sci*, 1 (1), pp. 10-16. Cited 2 times.
-

- 50 Tahreen, A., Jami, M.S., Ali, F.
Role of electrocoagulation in wastewater treatment: A
developmental review ([Open Access](#))
- (2020) *Journal of Water Process Engineering*, 37, art. no. 101440. Cited 39 times.
<http://www.journals.elsevier.com/journal-of-water-process-engineering/>
doi: 10.1016/j.jwpe.2020.101440
- [View at Publisher](#)
-

-
- 51 Thakur, L.S., Goyal, H., Mondal, P.
Simultaneous removal of arsenic and fluoride from synthetic solution through continuous electrocoagulation: Operating cost and sludge utilization

(2019) *Journal of Environmental Chemical Engineering*, 7 (1), art. no. 102829. Cited 27 times.
<http://www.journals.elsevier.com/journal-of-environmental-chemical-engineering/>
doi: 10.1016/j.jece.2018.102829

View at Publisher
-
- 52 (2018) *SDG 6 Synthesis Report 2018 on Water and Sanitation*. Cited 28 times.
UN
-
- 53 Wagle, D., Lin, C.-J., Nawaz, T., Shipley, H.J.
Evaluation and optimization of electrocoagulation for treating Kraft paper mill wastewater

(2020) *Journal of Environmental Chemical Engineering*, 8 (1), art. no. 103595. Cited 17 times.
<http://www.journals.elsevier.com/journal-of-environmental-chemical-engineering/>
doi: 10.1016/j.jece.2019.103595

View at Publisher
-

□ 54 (2020) *World Economic Forum. The Global Risks Report 2020 Insight Report*, p. 15.
WEF

□ 55 Zaied, B.K., Rashid, M., Nasrullah, M., Zularisam, A.W., Pant, D., Singh, L.
A comprehensive review on contaminants removal from pharmaceutical wastewater by electrocoagulation process

(2020) *Science of the Total Environment*, 726, art. no. 138095. Cited 52 times.
www.elsevier.com/locate/scitotenv
doi: 10.1016/j.scitotenv.2020.138095

[View at Publisher](#)

👤 Jami, M.S.; Department of Biotechnology Engineering, Faculty of Engineering,
International Islamic University Malaysia, P.O Box 10, Kuala Lumpur, Malaysia;
email:saedi@iiium.edu.my

© Copyright 2021 Elsevier B.V., All rights reserved.

[< Back to results](#) | 1 of 1

[^ Top of page](#)

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

Language

[日本語に切り替える](#)

[切换到简体中文](#)

[切换到繁體中文](#)

[Русский язык](#)

Customer Service

[Help](#)

[Contact us](#)

ELSEVIER

[Terms and conditions ↗](#) [Privacy policy ↗](#)

Copyright © Elsevier B.V. ↗. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the use of cookies.

 RELX