Monitoring petroleum fuel adulteration: A review of analytical methods

DOI: 10.1016/j.trac.2017.04.011
TrAC - Trends in Analytical Chemistry, 2017, 92, 1-11.

#	Paper	IF	Citations
56	Trends of non-destructive analytical methods for identification of biodiesel feedstock in diesel-biodiesel blend according to European Commission Directive 2012/0288/EC and detecting diesel-biodiesel blend adulteration: A brief review. *Talanta*, **2018**, 180, 239-247	6.2	20
55	Screen-printed electrodes for quality control of liquid (Bio)fuels. *TrAC - Trends in Analytical Chemistry*, **2018**, 108, 210-220	14.6	11
54	Identification of volatiles from heated tobacco biomass using direct thermogravimetric analysisMass spectrometry and target factor analysis. *Thermochimica Acta*, **2018**, 668, 132-141	2.9	5
53	Analysis of biodiesel-diesel blends using ultrafast gas chromatography (UFGC) and chemometric methods: Extending ASTM D7798 to biodiesel. *Fuel*, **2018**, 231, 264-270	7.1	6
52	Rapid and Simultaneous Prediction of Eight Diesel Quality Parameters through ATR-FTIR Analysis. *Journal of Analytical Methods in Chemistry*, **2018**, 2018, 1795624	2	14
51	Hand-Held Refractometer-Based Measurement and Excess Permittivity Analysis Method for Detection of Diesel Oils Adulterated by Kerosene in Field Conditions. *Sensors*, **2018**, 18,	3.8	12
50	DNA Barcode Quantification As a Robust Tool for Measuring Mixing Ratios in Two-Component Systems.. *ACS Applied Bio Materials*, **2019**, 2, 5062-5068	4.1	
49	Assessment of acute toxicity and cytotoxicity of fluorescent markers produced by cardanol and glycerol, which are industrial waste, to different biological models. *Environmental Science and Pollution Research*, **2019**, 26, 9193-9202	5.1	2
48	Determination of kerosene as an adulterant in diesel through chromatography and high-resolution mass spectrometry. *SN Applied Sciences*, **2019**, 1, 1	1.8	4
47	Gasoline Quality Sensor Based on Tilted Fiber Bragg Gratings. *Photonics*, **2019**, 6, 51	2.2	9
46	Detection of kerosene adulteration in automobile fuel with a novel metal clad planar waveguide. *Optics and Laser Technology*, **2019**, 119, 105589	4.2	5
45	Monitoring automobile fuel adulteration using ultrasound technique for environmental issues. *Measurement: Journal of the International Measurement Confederation*, **2020**, 150, 107004	4.6	6
44	Thermovolumetric and thermogravimetric analysis of diesel S10. *Journal of Thermal Analysis and Calorimetry*, **2020**, 139, 1507-1514	4.1	2
43	Graphene-oxide-coated fiber Bragg grating sensor for ethanol detection in petrol. *Measurement Science and Technology*, **2020**, 31, 025109	2	9
42	Treatment of diesel-contaminated soil using thermal water vapor arc plasma. *Environmental Science and Pollution Research*, **2020**, 27, 43-54	5.1	5
41	Fuels and fuel additives from furfural derivatives via etherification and formation of methylfurans. *Fuel Processing Technology*, **2020**, 200, 106308	7.2	25
40	An experimental investigation of the physio-chemical properties of locally refined diesel oil. *Sustainable Chemistry and Pharmacy*, **2020**, 15, 100200	3.9	5

39	Determination of biodiesel and used cooking oil in automotive diesel/green diesel fuels through high-performance liquid chromatography. *Journal of Chromatography A*, **2020**, 1629, 461512	4.5	2
38	Estimating fuel adulteration in automobiles using robust optical fiber sensors. *Microprocessors and Microsystems*, **2020**, 79, 103289	2.4	5
37	Why Aren't Embedded Fuel-Quality Sensors in Our Cars?. *IEEE Potentials*, **2020**, 39, 43-47	1	
36	Characteristics and thermal behavior of fresh and waste oil blends as supplement in diesel engines. *Sustainable Chemistry and Pharmacy*, **2020**, 16, 100266	3.9	3
35	Fuel Quality Monitoring by Color Detection. **2020**,		2
34	Studying the stability of Solvent Red 19 and 23 as excise duty components under the influence of controlled factors. *Fuel Processing Technology*, **2020**, 206, 106465	7.2	0
33	Paper spray mass spectrometry for discriminating the quality of commercial gasolines. *Analytical Methods*, **2020**, 12, 1926-1934	3.2	2
32	Defining a waste vegetable oil-biodiesel based diesel substitute blend fuel by response surface optimization of density and calorific value. *Fuel*, **2021**, 283, 118978	7.1	9
31	Detection of Gasoline Adulteration Using Modified Distillation Curves and Artificial Neural Network. *Chemical Engineering and Technology*, **2021**, 44, 527-534	2	3
30	Five-lump kinetic approach on biofuel production from refined rubber seed oil over Cu/ZSM-5 catalyst via catalytic cracking reaction. *Renewable Energy*, **2021**, 171, 1445-1453	8.1	1
29	An experimental and modeling study of autoignition characteristics of two real low-octane gasoline fuels in a heated rapid compression machine at elevated pressures. *Fuel*, **2021**, 295, 120645	7.1	2
28	Utilization of a triple hexagonal split ring resonator (SRR) based metamaterial sensor for the improved detection of fuel adulteration. *Journal of Materials Science: Materials in Electronics*, **2021**, 32, 24258-24272	2.1	3
27	Odor-Based Nanomechanical Discrimination of Fuel Oils Using a Single Type of Designed Nanoparticles with Nonlinear Viscoelasticity. *ACS Omega*, **2021**, 6, 23389-23398	3.9	0
26	A hybrid structured PCF for fuel adulteration detection in terahertz regime. *Sensing and Bio-Sensing Research*, **2021**, 33, 100438	3.3	3
25	Analyses of used engine oils via atomic spectroscopy - Influence of sample pre-treatment and machine learning for engine type classification and lifetime assessment. *Talanta*, **2021**, 232, 122431	6.2	2
24	Fast Pyrolysis as a Valorization Mechanism for Banana Rachis and Low-Density Polyethylene Waste. *Chemical Engineering and Technology*, **2021**, 44, 2092	2	
23	Design and numerical analysis of an extremely sensitive PCF-based sensor for detecting kerosene adulteration in petrol and diesel. *AEJ - Alexandria Engineering Journal*, **2021**, 60, 5419-5430	6.1	38
22	Data fusion of middle-resolution NMR spectroscopy and low-field relaxometry using the Common Dimensions Analysis (ComDim) to monitor diesel fuel adulteration. *Talanta*, **2022**, 236, 122838	6.2	0

21	Rapid Detection of Variability and Adulteration of Diesel Oils. **2018**,		1
20	Application of Technology in Mitigating Refined Petroleum Shortages in the Nigerian Downstream Petroleum Supply Industry. *International Journal of Business and Applied Social Science*, 1-13	0	
19	Detection of Fuel Adulteration Using Wave Optical with Machine Learning Algorithms. *Computer Systems Science and Engineering*, **2022**, 41, 19-33	3.9	
18	Comparative Analyses of Physicochemical Properties of Artisanal Refined Gasoline and Regular Automotive Gasoline. *Frontiers in Chemistry*, **2020**, 8, 753	5	
17	Gas chromatography. **2022**, 145-245		0
16	Novel automatic model construction method for the rapid characterization of petroleum properties from near-infrared spectroscopy. *Fuel*, **2022**, 316, 123101	7.1	2
15	Compound specific stable isotope analysis of aromatics in diesel fuel to identify potential cocktailing.. *Forensic Science International*, **2022**, 334, 111244	2.6	0
14	A heptagonal PCF-based oil sensor to detect fuel adulteration using terahertz spectrum. *Sensing and Bio-Sensing Research*, **2022**, 36, 100485	3.3	2
13	Study of cyclic cataluminescence virtual sensor array for gasoline quality monitoring. *Sensors and Actuators B: Chemical*, **2022**, 364, 131901	8.5	0
12	Development and Sensitivity Analysis of rGO-TiO2 Coated eFBG Sensor for the Detection of Ethanol in Petrochemicals. *IEEE Sensors Journal*, **2022**, 1-1	4	1
11	On-site colorimetric detection of adulterated gasoline using highly reflective 1D photonic crystal sensors based on photo-crosslinked polymer–titania hybrids. **2022**, 371, 132488		0
10	Recent Advances in Nanomechanical Membrane-Type Surface Stress Sensors towards Artificial Olfaction. **2022**, 12, 762		3
9	The Influence of Extractant Composition on the Asphaltenes Extracted from Asphalt. **2022**, 12, 1600		0
8	Stainless Steel Foil-Based Label-Free Modular Thin-Film Electrochemical Detector for Solvent Identification. **2022**, 13, 2256		0
7	Detection of the Adulteration of Motor Oil by Laser Induced Fluorescence Spectroscopy and Chemometric Techniques.		0
6	Instant identification of Hydrocarbon spill types using laser-induced fluorescence and associated hyperspectral imaging.		0
5	Chemical (bio)sensors. **2023**, 91-98		0
4	Instant identification of hydrocarbon spill types using laser-induced fluorescence and associated hyperspectral imaging. **2023**, 55,		0

3	A new colorimetric paper-based detection of furfural vapor as a fuel marker. **2023**, 214, 111210	0
2	Petroleum-Based Indian Reference Materials (BND). **2023**, 1-19	0
1	A digital image colorimetry approach for identifying fuel types in downstream petroleum sector. **2023**, 15, 1443-1452	0