Double capacitor detection method

Can double-input capacitively coupled contactless conductivity detector be used in inorganic ion analysis?
In this contribution,we optimize the structure of double-input capacitively coupled contactless conductivity detector (DIC 4 D) that proposed before by our group and successfully applied it in the capillary electrophoresisof inorganic ion analysis.

Can two electrode pairs arranged in two different capillary channels reduce parasitic stray capacitance?
Jaanus et al. 17 and Stojkovic et al. 18 proposed two electrode pairs C 4 D detector,which are arranged in two different capillary channels. This improvement provided an effective compensationwhich can suppress of the influence of the parasitic stray capacitance and decrease the baseline conductivity of the separation buffer.

Can contactless conductivity detectors improve the performance of capillary zone electrophoresis?
Zemann et al. 6 and Fracassi da Silva et al. 7 proposed the use of C 4 D in capillary zone electrophoresis and proved the advantages of C 4 D. Since then, much effort has been made to improve the performance of the contactless conductivity detectors. Do Lago et al. 8 improved the hardware and optimized the operational parameters.

How to reduce contact resistance and capacity of copper wires?
To decrease the contact resistance and capacity,the gaps between the copper wires were filled with conductive paints. The electrodes and their locations in DIC 4 D were identical to those in C 4 D. To prevent the signal from environmental interferences,a strict electromagnetic shielding was used.

What is the most accurate device for voltage sampling?
In the practical substation,the most accurate device for voltages sampling are the energy meterwith 0.2% ratio error,which is too rough to estimate the CVTs with this PCA method. Therefore,the wide application of high-accuracy energy meters is the foundation of this method.

What is the noise in C 4 D capillary electrophoresis?
As mentioned in the reference 15,27,the noise in C 4 D capillary electrophoresis mainly includes thermal noise,chemical noise from the chemical transformations during the electrophoretic run,noise from the signal generator,and ripple of the high-voltage source.

Detect the CVT with abnormal measurement in real-time without power outages. The regulation for determining abnormal CVT is its error surpass the limits. Can apply to all ...

Detect the CVT with abnormal measurement in real-time without power outages. The regulation for determining abnormal CVT is its error surpass the limits. Can apply to all voltage transformers with different accuracy levels. Experiments verify this ...

Double capacitor detection method

In other words, an online detection method was developed based on double capacitors that has a simple structure, high measurement accuracy, fast detection speed, and low cost.

In that case, an online moisture detection device was designed, which is based on double capacitors. A new method of capacitance complementation and integration was proposed to eliminate the limitation of single data. The device is composed of a sampling mechanism and a double-capacitor sensor consisting of a flatbed capacitor and a cylindrical ...

In this contribution, we optimize the structure of double-input capacitively coupled contactless conductivity detector (DIC 4 D) that proposed before by our group and successfully applied it in...

In this paper, an online detection method based on load classification has been proposed. Several identification parameters are first put forward to classify loads. With these parameters, low-load modeling and monitoring data of the period of industrial users stably out of operation are screened out. Finally, online monitoring is achieved by the principal component ...

Analyte: composé(s) cible(s) d"intérêt pour la détection lors d"une analyse HPLC. Phase mobile: phase en mouvement composée de solvants ou d"éluants circulant de l"injection à la détection . Phase stationnaire: phase immobile où se produit la séparation physique des substances à analyser. Débit: vitesse d"écoulement de la phase mobile en fonction du temps

The current study aimed to develop the moisture content detection of corn harvesters and even combine harvesters. In other words, an online detection method was developed based on double capacitors that has a simple structure, high measurement accuracy, fast detection speed, and low cost. A detection system was built with the STM32 chip micro ...

Comprehensive detection method for multi-contaminants in hydraulic oil based on inductance-resistance-capacitance analysis Author links open overlay panel Haotian Shi a 1, Shuang Yu a 1, Yucai Xie a 1, Wei Li a, Hongpeng Zhang a, Yiwen Zheng a, Shuyao Zhang b, Guobin Li a, Yuqing Sun a, Haiquan Chen a

In this study, the Lift-off Characteristics (LoC) of the hybrid structures are studied, and an effective method for identifying relevant indications such as defect and anomaly for dual-mode sensor response signals with lift-off interference by combining the testing data of both detection modes and the LoC curve is proposed.

The invention also relates to an apparatus and method for identifying the location of the fault (e.g., the section of the bank) in a double ungrounded shunt capacitor bank or double WYE shunt ...

To tackle this challenge, this paper proposes an extension of the nonlinear double capacitor model by increasing its order, parameter dependency with C-rate, and an ...

Double capacitor detection method

Aimed at the problems of the poor detection stability and low accuracy of the current grain moisture content detection device in harvesters, a dual-capacitor detection device was designed. The complementarity and integration between the two groups of capacitors were used to improve the detection stability and accuracy. The structure ...

In this paper, an improved double inputs direct contact and single output capacitively coupled conductivity detector (DISODCD) based on traditional contactless capacitively coupled ...

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The physical mechanism of CVT ME is as follows: From Fig. 1, the high voltage U p on the primary side is divided into medium voltage by the CVD, and then the medium voltage is reduced into the low voltage output U s by the IVT. Since the high voltage U p is stepped down by the CVD, the insulation requirement for the IVT is reduced. The CVD is composed of hundreds ...

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