Capacitor voltage determination method

Can a voltage transformer be measured without a capacitor?
While it is possibleto measurethe linear error of a voltage transformer without using anystandard capacitor (e.g.,with step-up method),most laborato-ries base their voltage-ratio traceability on standard capacitors;that is,calibrate voltage transformers against capacitors.Other methods are very cumbersome to implement.

Why is voltage coefficient important in high-voltage calibration?
Abstract-- The voltage coefficient of compressed gas capacitorsis a relevant parameter in high-voltage calibrations. Thesecapacitors,used as standards,are calibrated at low voltages sothat it is necessary to know their variation when they are used athigh voltages.

What is the minimum s -value in a cathodic circuit?
In the cathodic part,the minimum S -value is nearly zeroat the vertex voltage from 2.2 V to 2.5 V,and increases to 0.01 at the vertex voltage of 1.9 V,and rapidly reaches 0.1 at the vertex voltage of 1.4 V. On the other hand,the S -value is much small in the anodic part,which is no more than 0.01 except at the vertex voltage of 4.4-4.5 V.

Can lithium-ion capacitors be used to study electrochemical stability?
We have found that the evaluation methods,for a specified scan rate or current rate,are very helpful to develop the practical lithium-ion capacitors,which can be used to comparatively study the electrochemical stabilityof AC materials,polymeric binders,electrolytes,and even the current collectors.

Is a negative capacitance method valid in organic light-emitting diodes?
The validity of the method is confirmed by experimental datameasured from a set of single-organic-layer devices with different layer thicknesses. Pingree L S C,Scott B J,Russell M T,et al. Negative capacitance in organic light-emitting diodes. Appl Phys Lett,2005,86: 073509 (1-3)

What is anodic CV test?
The anodic CV test started from 2.0 V to the vertex voltage of 3.8 V at a scan rate of 2 mV s -1, and then the vertex voltage increased with a 0.1 V-step until the final voltage of 4.3 V was reached, as shown in Fig. 1 b. For every vertex voltage three cycles were measured and the data of the second cycle was chosen.

Chapter two - Voltage- and Current-Clamp Methods for Determination of Planar Lipid Bilayer Properties. ... In the circuit in Fig. 23, the capacitance of planar lipid bilayer is represented by the capacitor C BLM. The voltage at the point D is amplified by a noninverting amplifier with the gain k: (5) k = R 1 + R 2 R 2.

As a result, the proposed determination method can also be applied in EV wireless charging, where the air gap varies from 150 to 300 mm. Specifically, power efficiency drops when the compensation capacitors determined in the nearest and farthest cases are obtained as Di @150mm = 22.07% and Di @300mms =

21.98%, respectively. These results ...

The LF voltage ripple is a function of the inductor ripple current going through the output capacitor"s impedance. This impedance is formed by the capacitance value along with the parasitic equivalent series resistance (ESR) and parasitic equivalent series inductance (ESL) that come "free of charge" with your capacitor.

The voltage dependence of both capacitor and resistor connected in series were measured in the range of 10 V-1000 V against a reference 1000 pF capacitor of 30 kV-rated voltage that had negligible voltage dependence at a hundred voltage level. ... New multifrequency method for the determination of the dissipation factor of capacitors and of ...

Moradian et al. used the GA to find the optimal locations and sizes of fixed and switched capacitors equipped with stand-alone voltage control systems to minimize the total costs of energy losses and installed capacitors. Diab and Rezk used a two-stage method to solve the optimal capacitor placement problem. First, the loss and voltage ...

In this work, different determination strategies of stable electrochemical operating voltage window for practical LICs have been comparatively studied, including the ...

In 1960, J. Hilibrand and R. D. Gold developed a formula for capacitance-voltage measurement of the impurity/doping profiles of semiconductor junctions [2]. Their formula was later included in reference books of A.S. Grove [3], Simon Sze [4] and others. The method involves the measurement of the junction barrier

Measuring voltage dependence capacitance of high voltage compressed gas capacitors is challenging when levels are below one ppm (one Micro-Farad per Farad). Indeed, traditional methods such as direct capacitor comparison, voltage transforming, voltage-...

This paper describes the development of a double frequency measurement method by the aid of which the voltage dependent capacitance variation of high voltage ...

This paper presents a new strategy for the analytic determination of the natural voltage balancing dynamics of three phase flying capacitor converters. The approach substitutes Double Fourier series representations of the PWM switching signals into a non-linear transient circuit model of the three phase converter. This results in a linearised state space model with the Fourier ...

capacitor voltage ripple of SMs in MMC. Harmonic current injection is one scheme to greatly reduce the capacitor ripple of SMs in MMC [9-15]. The main difference between differ-ent current injection methods is the determination method of

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