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**Sh. A. Bachtaev[1], A. Zh. Toigozhinova[2], G. K. Sydykova[3], A. K. Kodzhabergenova[4]**

[1]Almaty university of power engineering and telecommunications, Almaty, Kazakhstan,
[2]Kazakh academy of transport and communications named after M. Tynyshpayev, Almaty, Kazakhstan,
[3]The Korkyt ata Kyzylorda state university, Kyzylorda, Kazakhstan,
[4]Kazakh university of communications, Almaty, Kazakhstan.
E-mail: aynur_t@mail.ru, sydykova77@mail.ru, asico_9-67@mail.ru

# NEW CONTROLLING METHODS OF THE OZONE CONCENTRATION IN THE ATMOSPHERIC AIR

**Abstract.** Basic principles are expounded and prospects of application of homopolar corona charge on microelectrodes (microwire, needles and etc.) for development of methods and methods of control of concentration of ozone in atmospheric air. Investigational and described ozonometers descriptions corona charge, based on distinction of values of to mobility of ions of different arctic ions in the external zone of charge. Constructions over and technical descriptions of small ozonometers are brought, worked out on the basis of corona charge. For this aim the existing dependence of the middle mobility of ions is used in the zone of corona digit from the concentration of ozone in atmospheric air, coming from outside. Ozonemeters built on this principle work on a balancing network comparing average mobility of ions in two chambers during entering of ozone into charge zone. In other device for control of ozone concentration two charge intervals are used with the volume charges of different polarity, which appear between the corone needles and external electrodes, combined with ozone swallowers from porous silicagel. The ozonometer is based on the impulse-mode of negative crown, which determines the concentration of ozone in atmospheric air based on current of crown.
**Keywords:** corona charge, microelectrode, ozone, mobility of ions, balancing network, impulse mode, electronic avalanches.

**Introduction.** Measuring of concentrations of ozone has an actual value for physical and chemical features of ozone and technology of ozone production and continuous control of amount of ozone in the air is also needed in ozone treatment of domestic and official premises apartments and curative chambers and hospitals. In all cases ozone measuring devices are required to be simple in their constructions and comfortable during operations with high noise immunity and accuracy in measuring [1].

Well-known methods and devices for control and determination of concentrations of ozone in the air and based on iodide metrical, interferometrical and photometrical methods are in most cases stationary devices and differ with complicated performance and inconvenience. A classic iodine metrical method is also labor intensive during realization of control of ozone and does not provide continuity of measuring [2].

Presently there are several hundred methods of analysis and control of ozone.Conditionally they can be divided into physical, physical and chemical and chemical.

Based on other classification it is possible to divide into absolute and relative. The first ones allow directly to get the size of measureable concentration; the most accurate from them can serve as primary standards, based on which the calibration of ozonemeters are performed; the second ones measure a size, and being the function of concentration of ozone, they themselves require to be calibrated.

The problem of creation of method of control of ozone and development of the devices for its realization was set, and those differed from well-known methods with its high exactness and reliability of measuring at simplicity and comfort in-process. The results of researches showed that the most effective