2. Барановський В. Ф. Духовность личности в системе современных общественных отношений : монография / В. Ф. Барановський. – К. : Правник. – НАВСУ, 1998. – 141 с.

3. Гіптерс З. В. Короткий культурологічний словник-довідник / З. В.Гіптерс. – Львів : ЛБІ НБУ, 2004. – 127 с.

4. Гончаренко С. Український педагогічний словник / Семен Гончаренко. – К. : Либідь, 1997. – 374 с.

5. Еникеев М. И. Общая, социальная и юридическая психология. Краткий энциклопедический словарь / М. И. Еникеев, О. А. Кочетков. – М.: Юридическая литература, 1997. – 448 с.

6. Ерасов Б. С. Социальная культурология : пособ. для студентов ВУЗов. / Б. С. Ерасов. – 2-е изд., испр. и доп. – М. : Аспект Пресс, 1996. – 591 с.

7. Піча В. М. Соціологія: терміни, поняття, персоналії / уклад.: В. М. Піча, Ю. В. Піча, Н. М. Хома та ін. – К. : Каравел, Львів : Новий Світ-2000, 2002. – 480 с.

Марина Татушенко

MAGNETIC ANISOTROPY

The phenomenon of a magnetic anisotropy has major value in magnetization of magnetic ordered materials. It affects in the fact that arrangement of nuclear magnetic moments M_j or vectors of a spontaneous magnetization I_s in one directions of a crystal will be more energy-convenient, that in others (directions of light and difficult magnetization). The simplest magnetic anisotropy is at materials, which have the hexagonal lattice (fig. 1, a), for example, a cobalt. In lit the axis of light magnetization at $H = 0$ is disposed along a hexagonal axis $\tilde{n}$, and axis of difficult magnetization is disposed in a basal plane. The relevant magnetization curves are given on fig. 1, b.

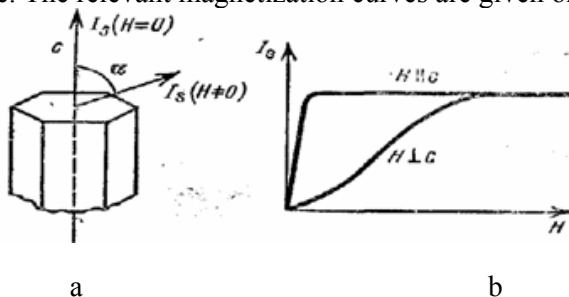a   b

Fig. 1. Magneto-crystalline anisotropy of cobalt.

The anisotropy in different directions in a basal plane is small; it is possible to neglect it; then for the description of magnetic anisotropy energy $W_{\grave{a}i}$ of such crystal it is possible to take advantage of a relation for a uniaxial anisotropy: $W_{\grave{a}i} = K_1 \sin^2 \alpha + K_2 \sin^4 \alpha$ (1), where K_1 and K_2 – constants of a magnetic anisotropy which are determined observationally, α is an angle between a direction I_S and a hexagonal axis $\tilde{n}$. Values of constants K_1 for some magnetics are given in tab.

Table 1. Values of constants K_1 for some magnetics.

Magnetic	K_i, $\ddot{A}\!\!\mathit{æ}/\grave{i}^{3}$	T, $\hat{E}$
Fe	$5 \cdot 10^4$	78
Ni	$-3 \cdot 10^3$	?
Co	$6 \cdot 10^5$	?
Dy	$1,9 \cdot 10^7$	?
Fe_3O_4 **(Magnetite)**	$-1,1 \cdot 10^4$	300
$NiFe_2O_4$ **(Ferrite - spinel)**	$6,87 \cdot 10^4$	77

The formula (1) expresses common character of dependence of anisotropy energy on directions in a crystal.

There are such microscopic sources of a magnetic anisotropy:

1. The mechanism of interaction is caused by a dipole-dipole interaction of magnetic atoms in a lattice. Energy of dipole-dipole magnetic interaction is proportional to $\grave{I}_j^2$: $W_{\ddot{a}\grave{e}\ddot{i}} \approx \grave{I}_j^2 / \alpha_0^3$, where α_0 – the lattice parameter; it can have essential importance only in materials, in which M_j are major (for example, in Gd).

2. The mechanism of the one-ionic anisotropy is interlinked to effect of the anisotropic electric field of a crystal $W_{\hat{e}}$ on spin-orbit interactions in atom.

3. Electron cloud has not spherical (anisotropic) shape in some magnetics due to that in them the moment M_L is not refrigerated by a crystalline field. Then the overlap degree of these electron clouds of two neighboring atoms will vary at superimposition of a field H at rotational displacement of the moments M_j that will give to anisotropy of an exchange interaction.

4. A so-called magnetoelastic anisotropy appears in a magnetic in consequence of the phenomenon of a magnetostriction. Its energy is calculated by the formula: $W_{i\,\bar{i}} = 3/2(\lambda_s \sigma)$, where σ – a stretching voltage, λ_S – a magnetostriction at stretching to saturation.

5. Dimensions and the shape of an explored sample effect essentially on magnetization curves of ferromagnetics and ferrimagnetics. The long and thin cylinder is easier for magnetizing, than short and thick (a magnetic anisotropy of the shape). In a short sample the degaussing field, which is proportional to a magnetization: $\acute{I}_{\,\delta\hat{i}\,\varsigma\grave{i}} = NI$, where N is a demagnetization factor, which depends on the shape and the sizes of a sample.
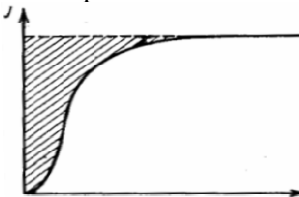

Fig. 2. The shaded area is numerically equal to magnetization work.

Presence of a degaussing field creates unstableness of a vector I_s in some sample directions and thus it gives the contribution to a magnetic anisotropy of material.

Magnetic anisotropy is the most convenient to characterize by magnetization work. At magnetization of a ferromagnetic some energy is spent, which is numerically determined by the area, which is restricted by an axis of a magnetization, a magnetization curve and continuation of a

curve agreeable to the saturation, to section with a magnetization axis (fig. 2).

REFERENCES
1. Белов К. П. Магнетизм на Земле и в Космосе / К. П. Белов, Н. Г.Бочкарев – М. : Наука, 1983. – 192 с.
2. Киренский Л. В. Магнетизм / Л. В. Киренский – [Издание второе, переработанное и дополненное]. – М. : Наука, 1967 – 196 с.

Андрій Твердохліб

DRAMA OF UKRAINIAN ORTHODOX IDENTITY: BETWEEN ALTERNATIVES AND PARODY

The Christian Church identity always carries an element of drama in itself. And such an element arises in the course of the encounter between the transcendental Word and that group of Noah's descendants who wearied of earthly wandering and emerged from the ruined tower of a dust-covered Babylon acquire some common lineaments of their way of familiarization with God and formed, ultimately, into a national culture. Likewise, those on the Ukrainian way through its recent history, who still goes round the phantom towers of the contemporary Babylon, that at times shines with Kremlin-like stars on top and sometimes remarkably remind the vision of a depleted gas well.

The twentieth century has left high controversial version of three "rebirth" of the Ukrainian Autocephalous Orthodox Church (UAOC) in the political vocabulary. By these "three rebirths", we understand the autocephalous movement of the 1920's, at the head of which was Metropolitan Vasyl Lypkiwsky; the creation of a hierarchical structure of the Ukrainian Orthodox Church in 1942, on the territory of the Reich Commissariat "Ukraine"; and the events of 1989 to 1992, that were marked by the mass transfer of Orthodox communities of Halychyna into the jurisdiction of the episcopate formed by Bishop Ioan Bodnarchuk. The most optimistic of publicists even to this day speak of the latter as the "third rebirth" of the UAOC.

Actually, a concept of the "third rebirth" contains within itself the sub-versive idea of the self-sufficiency in the process of the creation of the new church structure, independent of émigré centres abroad. Furthermore, this was reflected in the saying, popular in circles at the beginning of the 'nineties: "We need neither Moscow nor Rome." From the point of view of canon law, of course, 1989 did not present the creation of a new church, but only the beginning of a process in returning the church communities in the Ukraine under the ju-