

Soviet biologist arrested in Moscow

from Vera Rich

THE arrest of the Moscow biologist Sergei Kovalev on December 27, 1974, seems to mark yet another hardening of Soviet pressure on dissident intellectuals.

Kovalev, whose main scientific work has been in the fields of mathematical biology and genetics (itself, until recently, a suspicious activity, by Soviet standards) is a member of Sakharov's Initiative Group for the Defence of Human Rights in the USSR, and also of a small group of Amnesty International, set up in Moscow in 1974. He has been active in the defence of prisoners of conscience within the USSR, and in campaigning for the free circulation of ideas and information. In 1974, when the *samizdat* "Chronicle of Current Events" resumed publication after an 18 month gap, Kovalev was one of the three dissidents who publicly claimed responsibility for its publication, being convinced "of the necessity for truthful information concerning the infringements of fundamental human rights in the USSR and for its availability to those interested." On the very day of his arrest, in a New Year's message telephoned to London, Kovalev and Sakharov appealed "from a huge and tragic country, the fate of which has huge influence on the life of the whole world" for a general amnesty for prisoners of conscience, mentioning among others mathematician Leonid Plyushch, biologist Vladimir Bukovskii, and psychiatrist Semeon Gluzman. "Let a general political amnesty open for our country and for all countries of the world the way to freedom and a good and sensible life."

The same day, Kovalev was arrested,

apparently on a charge of being in contact with the illegal *Chronicle of the Lithuanian Catholic Church*. This journal, which has a nationalist as well as a religious slant, has already been the cause of arrest of a number of Lithuanians; at the end of November, however, at the request of the Lithuanian KGB, a number of prominent Moscow dissidents, including physicist Andrei Tverdokhlebov, had their apartments searched. Like Kovalev himself, those involved do not appear to be Lithuanians, Kovalev's professional contacts with Lithuanians appear to be slight—only one of his published papers (*Biofizika*, 15, No. 1, 147–155) includes a Lithuanian, I. Dudzyavichyus, among the co-authors. He is, however, reported to have intervened in April 1974, in the case of a Lithuanian woman claiming US citizenship, who was arrested while attempting to reach the American Embassy in Moscow. It would seem difficult, simply on these grounds, to present Kovalev as a fanatic in the cause of Lithuanian separatism.

Nevertheless, the charge is that of possessing and disseminating copies of the *Chronicle of the Lithuanian Catholic Church*. Whether in fact Kovalev did, in his capacity as a campaigner for human rights, have some copies of this *Chronicle* in his possession is not known. The accusation does, however, have a number of advantages for the prosecution. Firstly, the case against the *Chronicle of the Lithuanian Catholic Church* has already been opened, and it is simply a matter of adding another name to the list of the accused, rather than opening a new case. Second, the trial will take place in Vil'nyus, capital of the Lithuanian SSR, away from the focus of attention which a Moscow trial would be for Western journalists. And thirdly, in a society

which extols atheism as "scientific", the attempt to implicate Kovalev with a religious journal may be, to a certain extent, a kind of smearing of his intellectual status.

Nevertheless, these moves to dispel publicity from the arrest and forthcoming trial have not met with unmitigated success. An appeal organised by Academician Sakharov on Kovalev's behalf has been signed by no less than 50 Soviet intellectuals, including linguists, mathematicians and research scientists. □

Toxic chemicals register first step

from Peter Collins, Geneva

BASIC agreement on the establishment and organisation of the proposed International Register of Potentially Toxic Chemicals (IRPTC), was reached at the meeting held at Bilthoven, Netherlands, last month (*Nature*, January 17). Interest in the meeting was considerably more than had been expected by its organisers, the Netherlands government and the United Nations Environment Programme, 57 scientists representing 27 countries and institutions being present. Besides the decision on basic organisation (a central unit correlating and disseminating data from a network of national sources) there was fruitful discussion of the type of work programme that could realistically be undertaken in compiling the register.

For this purpose, there should be an "intensive" programme, providing comprehensive information on a relatively small number of particularly important substances; and a much larger "extensive" programme listing a restricted number of attributes of many more compounds. The intensive programme, it is suggested, should start with a pilot project confined to a small number of chemicals; the object would be to test the best format for presentation of the material, to study means of collecting the data and checking their validity, and to estimate the costs of operating this programme. The extensive programme, on the other hand, would be "open-ended", and might start by making use of information from existing data files. Use could be made of the facilities of the UNEP's International Referral System for Sources of Environmental Information (IRS), which is in a position to provide information on the whereabouts and capabilities of existing data collections. This initial survey should cover information of a fairly general nature as well as data on individual chemicals. It should be matched by a survey of potential users of the register, and could thus lead to a preliminary version of the proposed network directory which

"CHEMOSYNTHESIS", the reduction of metals from their ores by means of bacteria, is becoming an important field of research in the Soviet metallurgical industry, and is considered of great potential in the use of a wide range of ores from bauxite to gold agglomerates and uranium ores. Their use of bacteria ranges from the effective utilisation of ores such as the carbonate ores of manganese, where present methods lose up to 35% of the available metal (the chemosynthesis method yields up to 97.5% metal even from low-grade ores), to the extraction of gold and tin from arsenic-bearing agglomerates.

While some such processes are still only in the pilot-plant stage (the extraction of gold, manganese, bismuth, lead, antimony, lithium, or germanium) or

else exist only as theoretical projects (extraction of nickel, thallium, molybdenum, titanium and the microbiological lysis of aluminosilicates), some have already been introduced on a small industrial scale. Such plants, for the extraction of copper, uranium and zinc, are already operating in Kazakhstan and the Urals.

An intensive search is going on, in the research institutes of the Ministries concerned, to find new strains of thermophilic bacteria, multiplying at 55–60° C, which can reduce metal ores. The details of the processes involved remain obscure, but investigations on gold ores have given strong indications that the bacteria and other microorganisms concerned are capable of forming organic compounds containing the gold in the course of their metabolic processes.