

reactions of the catalyst may be produced with electronic equipment, thus automating the whole process.

- Laser techniques used for pyrolysis could provide in the near future homogenous processes, in which a single product could be produced, eliminating expensive purification steps. Pyrolysis has been used to obtain valuable organic products such as aniline, phenol, and light hydrocarbons from cracked pyrolysis. Scientists in SRI International's chemical kinetics department have been worked with infrared lasers to produce nitro-benzene pyrolysis by means of laser-powered homogenous pyrolysis (LPHP), which has proven to be successful on a number of low-molecular-weight model substrates. LPHP utilizes an unreactive bath gas (in this case N_2) to absorb the infrared radiation and to transfer this energy by collision to substrate molecules, since if pressure is high enough, thermal distribution of energy take place faster than the chemical reaction. Their results show that laser pyrolysis is almost purely homogenous, in contrast to conventional (hot-wall) pyrolysis, which leads to compounds generated heterogeneously and thus to impurities. Moreover, laser homogeneous pyrolysis overcomes three crucial problems of the currently used pyrolysis: 1) the laser technique eliminates hot wall problems because of homogenous heating; 2) the maximum temperature achieved by the laser technique is more than twice that achieved by the current process (2000 versus 900 degrees Celsius); and 3) the heating rate is 10 billion degrees Celsius per second using laser pyrolysis, compared with 100 degrees Celsius per second from the current process.

- Lasers would make possible massive production of vitamins, proteins, and antibiotics, among other biochemical products. In biochemical synthesis, the critical point is the selective excitation of the reacting molecule. In the case of Vitamin D production, the production itself is through the photo-induced change in the ergosterol molecule (Vitamin D precursor), at present produced by arc lamps, with a yield of approximately 35 per cent. The use of ultraviolet lasers will improve the yield to 80 per cent. Several private companies are working on these process at a pilot plant level, for example, Dow Chemical and the Batelle Columbus Laboratory.

The advantages of laser technology in this field are enormous, speeding up production time, decreasing operational cost, increasing the level of production, and reducing the equipment necessary for production.

- Modification of surfaces and production of surface films or coatings by laser-induced chemistry are already considered economically feasible processes. Processing is confined to the near-surface region and the bulk material is not disturbed. Thus lasers can be applied to annealing, alloying, and curing processes. For instance, Mobil Chemical company has worked with very good results on the application of electron beam radiation to curable materials, such as resins. Their economical analysis shows that electron beam radiation coating costs from \$1.50 to \$2.50 per pound.

Part II: Malaysia Survey

Crackdown on the drug traffickers

by Paul Zykofsky

Every day the leading newspapers in Malaysia publish a special section highlighted by a drawing of a skull titled "Dadah watch."

Dadah is the name given to dangerous drugs in Malaysia and the *Dadah* watch column is part of the government's campaign to stamp out drugs launched by Prime Minister Mahathir on Feb. 19. As Deputy Prime Minister and Home Minister Datuk Musa Hitam explained to *EIR* in an exclusive interview, Malaysia "considers the drug menace as a security threat." Dangerous drugs, he added, "are killing the young people, which is the biggest potential that the country has in order to develop."

The government campaign involves tougher anti-drug laws, expanded rehabilitation facilities for addicts, and a nation-wide publicity campaign involving all sectors of the society.

A national task force

In the recent period, since Deputy Prime Minister Musa took over the Home Ministry, a nationwide anti-*dadah* task force has been established to centralize and coordinate the fight against drugs. Several members of the task force explained the problem faced by Malaysia to this correspondent. Although no dangerous drugs are grown within the country, Malaysia is a transit point for heroin and opium produced in the nearby Golden Triangle region covering northern Thailand, Burma, Laos, and China. Drugs passing through Malaysia make their way to both Europe and Hong Kong.

Local consumption of drugs first emerged a problem in the late 1960s and early 1970s when American soldiers on leave from Vietnam and hippies from the United States and Europe began visiting Malaysia and creating a local demand for hard drugs.

The situation worsened considerably in 1975-76 when young Malaysians themselves increasingly began to take drugs. At present there are some 79,000 drug addicts who have been caught or who have voluntarily registered with the

government. Members of the anti-*dadah* task force estimate that there may be several times that number of addicts in the country.

To deal with this situation, the government has recently enacted tough new anti-drug laws which will help crack down on the traffickers. First, the Dangerous Drugs Act of 1952 has been amended so as to impose a mandatory death sentence on traffickers, removing the provision for life imprisonment which usually resulted in a prison sentence of 15 years.

In addition, the definition of a trafficker has been changed. Whereas in the past a person would have to be in possession of over 100 grams of heroin or morphine—enough to prepare 200,000 shots of heroin—the amended law has lowered this amount to 15 grams. In the case of raw opium, the amount was lowered from five kilograms to one kilogram; while the present specified weight of one kilogram for refined opium and 200 grams for cannabis or cannabis resin remain unchanged. The amended law also gives law enforcement officers the power to intercept letters and telephone lines with the permission of a public prosecutor, and evidence gathered in this way is admissible in court.

With this new law—one of the roughest in the world—drug enforcement officers are confident that they will be able to catch some of the big drug runners operating through Malaysia.

Financial tracking

Significantly, provisions also exist in Malaysian law to examine bank accounts and inquire as to a person's source of income, which will allow the government to go after some of the "Mr. Bigs" who control the traffic but do not touch the drugs directly. Deputy Prime Minister Musa indicted that there exists clear evidence of links between trafficking and high finance, although the problem is that "those people are outside the country and beyond our reach."

The second law passed recently, the Drug Dependents and Rehabilitation Bill, gives detailed guidelines for treatment and rehabilitation of addicts under court order as well for those who volunteer.

The third part of the campaign is aimed at "a total involvement of the people as well as the government at all levels," according to Musa. Meetings with voluntary organizations, political parties, trade unions, employers organizations, and religious organizations are being planned by the Home Ministry to create a national public awareness about the problem and the dangers of *dadah*.

However, while Malaysia intends to do everything possible to stamp out drugs, members of the anti-*dadah* task force emphasized that this is a war which must be waged on an international level and urged the United States and Europe to enact tougher laws. "We will try to keep our house as clean as we can," one officer noted, "but we can't fight this on our own, we need an international commitment."

Interview: Deputy Prime Minister

'Drug pushers are a security threat'

The names of Prime Minister Mahathir Mohamad and Deputy Prime Minister Datuk Musa Hitam have been linked together since 1969 when Mahathir was expelled from the ruling UMNO party and Musa was dismissed from his post as Assistant Minister to then-Prime Minister Tunku Abdul Rahman. In that year of mob violence and race riots in Kuala Lumpur, Mahathir and Musa were branded as "extreme right-wingers" because they favored measures to improve the conditions of the native Malays—thus upsetting the delicate balance between Chinese and Malay communities.

Within a few short years, however, many of the proposals to correct economic imbalances and inequalities made by Mahathir and Musa were incorporated into the government of the new Prime Minister Tun Abdul Razak, and the "two Ms," as they have come to be known, returned to active politics. Musa rose up the government and party ladder quickly to become Minister of Primary Industries in 1974 and then successor to Mahathir as Education Minister in 1978. His political skills were put to the test in June 1981 when he defeated Finance Minister Tunku Razaleigh Hamzah, a member of a princely family with business ties to the Chinese community, in a party election for Deputy President, a post which carries with it the deputy premiership.

In the following exclusive interview given to *EIR's* correspondent Paul Zykofsky in Kuala Lumpur on April 14, Datuk Musa discusses some of the problems Malaysia is facing today, with special focus on the anti-drug campaign launched by the government when he took over the Home Ministry in July 1981.

Q: First of all, what is your evaluation of the progress Malaysia has made since independence and the problems it faces today?

Musa: To give independence any meaning to the people of

the country, we must work hard. As a result of working very hard, I think we have achieved comparatively considerable success. Now, success also means higher expectations, and the higher the rate of success, the more it is felt whenever there is any small degree of failure. I think I can quite proudly say that we have been successful. But we face a real problem in the sense that we have been successful, more so because there are ever-present threats to the stability of our country.

First, of course, is the threat posed by communist elements. This is a problem we have been faced with ever since before independence. After independence the communist terrorists continued to shoot at us and even today they are still shooting at us.

Secondly, the threat comes from the reality of the multi-racial, multi-religious nature of our country. In our reasonably open system of parliamentary democracy, people talk and talk means touching on the sensitivities of religious and racial beliefs. Under such circumstances any wrong statement, or any mishandling of the situation could cause a lot of problems, as demonstrated by a big incident in our history, what has come to be known as the May 13 [1969] incidents, the only time since independence when we have had racial riots in Kuala Lumpur.

The communist problem we know how to tackle. We have been living with it for a long time, and the basic way of dealing with it is to develop, to fill the stomachs of our people—to put it in an oversimplified way. That is the best bulwark against communism. Racial and religious intolerance, extremism, can easily be matched again, number one, by economic development, and number two, by education, and by exposing the problems of different communities to one another. In other words, by a concept of national unity, to propagate the idea of tolerance through our educational system, as well as through the New Economic Policy (NEP). The NEP is aimed at restructuring society so that a man of a certain racial background will not be identifiable with a certain economic activity. And I think we have been reasonably successful thus far.

One of the biggest problems as a result of the very fast pace of development—which is a third threat which has been unseen all this while—is the problem of cultural shock. By cultural shock I mean that the challenges of modern day life are too great. For example, the village boy is suddenly brought into the town to be given higher education, and instead of a very peaceful, quiet life he then finds himself in a situation where the pace of development is about 10 times faster than what he is used to. He becomes rather confused. That's what I mean by cultural shock. He does not know how to adjust and adapt himself to the very fast pace of development in the towns. So what does he do? He tries to find various forms of escapism. Sometimes he turns to religion—which is good if religion is resorted to as a practice, as a belief, as a form of spiritual well-being; but it would be negative if it is extreme.

But what seems to be increasingly menacing within our

society is that a lot of these young men have been resorting to another form of escapism, and that is drugs. What we call here *dadah*. In our country, as the years go by and since I became Minister of Home Affairs and Deputy Prime Minister, I have become more and more depressed about this problem seeing young men and women beginning to be hooked on drugs.

The interesting thing about the drug problem in Malaysia is that the harmful drugs are not manufactured here, neither are they grown here in our country. All the drugs come in from outside. Malaysia is used as a transit point as well as a distribution point for our local population. Now this is certainly undesirable and we feel that something much more concrete and much more firm and drastic needs to be done. This explains the very drastic law we have just passed in Parliament. For once in my life I was pleased to introduce a law which even the opposition did not criticize. Why? Because they themselves are seeing the problem with their own eyes.

Q: What are the basic elements of this law?

Musa: Well, first of all, it is one of the toughest anti-drug laws in the world, next to Singapore and maybe two or three other countries. We feel that there is every justification for this law, because we consider the drug menace as a security threat, as a problem of an element that kills, that destroys the human mind, that destroys the human being. It's not by the shot of a bullet but by the shot of the needle or by the shot of smoking or the shot of swallowing. And we feel that those people who are involved in the trafficking of drugs, who are not necessarily the peddlers, are the killers and the murderers. And they are killing the young people which is the biggest potential that the country has in order to develop. The young are the ones that we have hope for and Malaysia is a country which has more than 50 percent of its population under 21, so if we want to have any meaningful future for our country we cannot allow our youth to be killed.

So, we say, it will have to be assumed that anyone found trafficking in drugs causes the death of youth of this country and they deserve the death penalty. It is as simple as that. And it is as drastic as that, and we don't apologize for it, because we feel that we want to see our country drug-free in a serious way. Drug traffickers make so much money that they don't care about losing, let's say 15 grams of pure heroin—which can administer up to 3,000 shots. And because of the millions of dollars they make, they don't understand anything else but the drastic law that we have passed. And so that is what the recent anti-drug legislation is all about in Malaysia. I must say this: we take people to court—and our judiciary system, we are proud to say, is known to be independent—and they have to go through due process of law. But once the judge says that he's guilty, death penalty is mandatory.

We have other programs to fight drugs. We will intensify



Malaysian Deputy Prime Minister Datuk Musa Hitam.

counseling through our school system, as well as through our youth club system, as well as through voluntary organizations. Then those who genuinely suffer from it, who have been hooked on drugs, we want to adopt a positive attitude, that is by welcoming them back to society if they volunteer themselves or even if they are caught. And so we have set up a one-stop rehabilitation center agency where anybody who is caught or who volunteers to be rehabilitated, will be treated on the spot by the various agencies.

Q: There also appears to be a widespread anti-drug campaign being carried out through the newspapers and television.

Musa: Yes, the Prime Minister launched an anti-drug campaign about a month or two ago and the Ministry of Home Affairs has taken over administering all matters related to rehabilitation of drug addicts as well as to monitor the problem. In the past, all problems related to drugs were treated by the Ministry of Welfare. I simply feel that the concept of treating all those who are guilty for drug offenses should not be welfare. I know that this may sound horrifying to psychologists in such countries as the United States, but I think, as I said earlier, that I want to regard this as a security problem.

The second step is that we are setting up what we call an operations room at the national level, and then, being a federal system of government, at each state level there will be

an operations room, where every case that is reported to us will be monitored and we will decide what to do with it.

The third step is a total involvement of the people as well as the government at all levels. To this end I am calling a meeting of all voluntary organizations and political parties, including the opposition parties, so that I can explain to them what we are doing and seek their assistance as well as their advice. And also to get them involved in this exercise. I am also getting all the GG departments at every level involved. And then I want to involve the private sector, the trade unions and religious organizations as well. And finally, I want the campaign that has been started to go on and on and on, so that this problem will have to be put on center stage, so that people will be made fully aware of it on a continuous basis.

As for foreigners, we will give sufficient warning before they come to Malaysia. At Malaysian embassies, visa centers, tourist representatives, we are going to say something like this: "The death penalty is mandatory for drug trafficking in Malaysia. Be forewarned." So that if they come here and are caught with drugs they won't send petitions and cry over it. And we are also going to remind the people at train stations, at ports; we have to tell people that we regard this matter as one of the biggest threats that we have ever faced, and that we are determined to stamp it out.

Q: Have you found evidence, as in Europe and other places, of links between drug trafficking, terrorism, and high finance?

Musa: Drug trafficking and high finance, definitely. But then you see, our country is only the importer and we are only able to stop the traffickers from coming here and from distributing it into smaller sub-traffickers, their agents. But even their agents, under the new law, will be considered traffickers. The definition of trafficking is very wide in our newly passed law. Definitely with high finance, but those people are outside the country and they are beyond our reach. But in terms of higher rates of crime, robberies, yes of course. Drug-taking and trafficking are related to higher crime rates. A higher incidence of all sorts of problems that society faces can be attributed to drugs.

The one point I would like to make is that the international community has not really succeeded in doing anything substantive about this. And just like in any other international organization, we talk and talk and talk—and Malaysia does not want to belittle the work of the international anti-narcotics agencies—but we feel that something much more substantive can be done. In the past, we have always said that if we do something ourselves first, and we do it well, then we can at least tell the world how things should be changed. We have always in the past been known to be a country that believes that charity begins at home. We will try to put our house in order first, but we would like to plead for the understanding and cooperation of the international community in ensuring that we succeed, because if we succeed, we can, to a great extent, jointly stamp out this problem.