

## SECOND INTERNATIONAL SYMPOSIUM

# EFFECTS OF SURFACE HETEROGENEITY IN ADSORPTION AND CATALYSIS ON SOLIDS

(ISSHAC) POLAND-SLOVAKIA, SEPTEMBER 4th–10th, 1995

The fact that the surfaces of real solids are geometrically heterogeneous, is now generally recognized. Moreover, hundreds of papers have been published containing convincing evidence that surface energetic heterogeneity is also an important factor, affecting fluid/solid interactions at the interface. There is also evidence that these effects may play a role in catalysis, but their importance is not well understood in that regard.

Geometric and energetic heterogeneities are widely recognized as a fundamental feature of solid surfaces in the study of adsorption. The appearance of such heterogeneity is predicted by statistical theories, well illustrated by computer simulations of crystal growth, and explained by the theories of formation of amorphous structures. In most cases, *energetic* surface heterogeneity is the direct consequence of *geometric* surface heterogeneity. It is surprising, therefore, that the theories of adsorption on energetically heterogeneous and no porous surfaces have historically developed along two separate routes. More surprising perhaps, is the almost total disregard of any energetic heterogeneity in the formulations of the kinetics and selectivity of catalysis by solids.

To share and broaden our understanding of the phenomena involved, a number of those working in this field perceived the need for a symposium devoted specifically to surface heterogeneity, as a forum for an intensive exchange of ideas, opinions, sorting out of the state of our knowledge, and the speeding up of progress in this field. There was also a desire to meet others engaged in the study of the same topics, in a setting where ideas could be easily exchanged and one-to-one discussions facilitated. In particular, we felt that it was time that those working in catalysis were made aware of the current state of the art in adsorption, and vice-versa. As a result, several dozen participants and accompanying persons assembled at the first ISSHAC, held in Poland in the summer of 1992.

The success of that first meeting and the encouragement on the part of many of the participants, gave us the incentive to plan and assemble another symposium, the second ISSHAC. As before, we are organizing it in Central Europe which is going to be again what it used to be in the past—the heart of Europe. The symposium will be held in the Tatras Mountains partially in Poland and partially on the neighboring territory of the Slovak Republic.

In remote villages you can encounter beautiful old castles, now mostly in ruins, that witnessed a glorious and powerful past, which is gone but waiting for revival. The history of this area was exceptionally eventful. The borders were frequently altered with changing rulers. Tribes migrated leaving behind artifacts of their splendid civilizations, which integrated with the distinct cultures of newcomers. All of them developed what is called today European cultural heritage. The contribution of Central Europe to this heritage was relatively little known due to unfortunate political gap which was bridged only recently. Nowadays borders and divisions are disappearing and natural bonds are being revived as nations of common geographical, economic and cultural background.

The Tatras (the highest part of the Carpathian Mountains) and surrounding area are in the midst of this historical region, hence the idea of organizing one part of our symposium in Poland and the other part on the Slovak side of the mountains. The Tatras are a pair of rugged Alpine-like massifs. They are the highest and the most magnificent, not only in the Carpatians, but also in the whole area from the Alps to the Caucasus and the Urals. For both Poland and Slovakia, the mountains are the most popular tourist attraction.

The foothills of the Tatras were inhabited as early as prehistoric times, which is evidenced by archeological findings of the Bronze Age, Neolithic Period, and Roman times. During the Roman Empire period these lands were inhabited by Celtic tribes who left here numerous traces of their culture. After the fall of the Roman Empire these territories were settled by the Slavic tribes, and the first powerful Slavonic—Great Moravian state was founded, which had close cultural links with Byzantium. Two eminent representatives of this nation, monks Cyril and Methodius, had been educated in Byzantium, and they adapted the Latin alphabet to the needs of the Slavic languages.

The Tatra Mountains never really separated the people living on the north side (Polish) and the south (Slovak). The villagers' lives were strongly dependent on the mountains. They hunted there, searched for treasures and pastured their flocks every summer. Folk culture of highlanders was evidently influenced by Balkan-Rytherian element, introduced to the Carpatian region during the so-called Wallachian migration of the 14th–16th centuries.

In the 14th–15th century herdsmen and nomads of Wallachian (Balkan-Rumanian) origin came from the East along the Carpathian Range, which can be traced in the names of places and pastoral tools. The Wallachians moved southwards and settled in the territory of present day Rumania. The mysteriousness of these people and of their culture gave rise to the legend of Dracula, which continues to be the subject of films from Hollywood.

The Tatras and nearby regions are characterized by evidently individual cultural features. They are most explicit in architecture, which is very different from architecture of other mountainous regions in Europe. Their music, full of Balkan and eastern elements, differs from folk tunes of other regions both in tonality and interpretation. A loud, high voice was supposed to spread far and wide a wildly sounding melody. Vocalized calls were communication signals of herdsman. Highlander's dances are fast, vigorous and require strength and deftness.

The symposium will start on September 4th, 1995 in the resort town of Zakopane in the Polish part of the Tatra Mountains. After three days of deliberations at that site, the participants will be transported by buses to the beautiful small town of Levoca on the Slovak side of the mountain, about 50 miles away from Zakopane. Participants are advised to fly to Cracow, the historical capital of Poland, which is the nearest airport to Zakopane. There are almost daily connections to Cracow from London, Frankfurt, Paris and Rome. From Cracow, participants will be transported by coaches (buses) and minibuses to Zakopane. After the closing of the symposium on September 10th, participants will be transported back to Cracow airport. Citizens of USA and of many other countries do not need Polish or Slovak visas, but you would be wise to check on this before departure.

The estimated average total cost per participant is expected to be about \$600. This will include the registration fee, accommodation, all meals and transportation. There will be a social program and tours organized for accompanying persons. Those who took part in the first ISSAHC will remember those are memorable moments of the last symposium. Attendance will be limited to approximately 150 participants and guests. Two pages abstracts of proposed contributions should be sent to:

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Selection of the papers will be made by a Program Committee formed by the Members of the Scientific Committee with the help of invited expert reviewers. The deadline for receiving abstracts in February 1, 1995.