Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)	**Pál Gábor / Tétényi**
Address(es)	**Konkoly-Thege M. út 29/33. H-1121 Budapest/ P.O.Box 77, H-1525 Budapest, Hungary (office)** **Tátra-u. 5/c. H-1136, Budapest, Hungary (home)**
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E-mail	**tetenyi@iki.kfki.hu (office),** **tetenyi.pal@upcmail.hu (home)**
Nationality	**Hungarian**
Date of birth	**03. October, 1929.**
Gender	**male**

Work experience

Dates	**08.01.1959-present**
Occupation or position held	**Research professor (recent position,1989-), unpaid (voluntary) research fellow (1981-89), research adviser (**secondary occupation, **1977-81) Institute director (1975-77), senior research fellow (**second job, **1970-75), Institute director (1959-70)**
Main activities and responsibilities	**Advises to the Institute Director, research in the field of heterogeneous catalysis**
Name and address of employer	**Institute of Isotopes, Hungarian Academy of Sciences** **29-33 Konkoly Th. M. út, H-1121 29-Budapest** **P.O. Box 77, H-1525 Budapest, Hungary**
Type of business or sector	**Research**

Dates	**1958-1960**
Occupation or position held	**Division head (1959-60), Research fellow (1958-59)**
Main activities and responsibilities	**Research in the field of radioisotope application in chemical research (1959-60), research in the field of heterogeneous catalysis (1958-59)**
Name and address of employer	**Central Research Institute of Chemistry, Hungarian Academy of Sciences, 114 Hungaria krt., Budapest XIV. Hungary**
Type of business or sector	**Research**

Education and training

Dates	**1954-57**
Title of qualification awarded	**Candidate of Science in Chemistry**

Principal subjects/occupational skills covered	**Physical Chemistry, Organic Catalysis,** Title of thesis: **Dehydrogenation kinetics of alcohols and the character of catalyst metals** (Russian)
Name and type of organisation providing education and training	**The Moscow State University, Lomonosov, Faculty of Chemistry**
Level in national or international classification	**PhD**
Dates	**1948-54**
Title of qualification awarded	**MSc in chemistry with the right to lecture**
Principal subjects/occupational skills covered	**Chemistry**
Name and type of organisation providing education and training	**The Moscow State University, Lomonosov, Faculty of Chemistry; The Moscow State Chemical Techology Institute, Mendeleev**(1949-50); **Budapest Polytechnical University, Faculty of Mechanical and Chemical Engineering, Chemical Division (**1948-49)
Level in national or international classification	**MSc**

Classification and decorations

2007 **Doctor Honoris Causae, Pannon University**
2001 **Budapest Award**
1991 **Member, Hungarian Academy of Engineers**
1987 **Foreign member, Royal Swedish Academy of Engineering Sciences**
1983 **Hungarian State Award (divided among L. Guczi, Z. Paál and P. Tétényi)**
1979 **Full member, Hungarian Academy of Science**
1970 **Corresponding member, Hungarian Academy of Science**
1969 **Titular Professor, Attila József Univerity, Szeged**
1967 **Award of the Hungarian Academy of Science**
1966 **Doctor of Chemical Science** Title of Thesis: Adsorption and Catalytic Effect in the Kinetics of Cyclohexane Dehydrogenation

Personal skills and competences

Mother tongue(s) **Hungarian**

Other language(s) **English, Russian Germain**

Self-assessment	Understanding		Speaking		Writing
European level (*)	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	C1	C1	C1
Russian	C2	C2	C2	C2	C2
German	A2	A2	A2	A1	A1

(*) Common European Framework of Reference for Languages

Main Research Area **Investigations of catalytic effect of metals, metal oxides and sulfides, the role of adsorption and mechanism of catalytic reactions (hydrocarbon transformations, hydrodesulfurization) using mainly isotopic labeling technique.**

Details on recent investigations of desulfurization catalysts

A flow recirculation, isotopic tracer method is employed to determine the amounts of total, reversible and irreversible sulfur uptake and exchange of hydrodesulfuration catalysts. Extent of sulfur heteroexchange and fraction of exchangeable sulfur in the sulfided catalysts is calculated by considering adsorption and exchange equilibria. A definite tendency to correlation (R^2~0.9) is observed between the extent of sulfur exchange and thiophene hydrodesulfurization activity of the catalysts. The amounts of exchangeable sulfur correlated reasonably well with the HDS activity. Activation energy values of cyclohexane dehydrogenation and benzene hydrogenolysis have been determined besides that of hydrodesulfurization, and the C-Cat,, H-Cat and S-Cat bond strength values have been calculated.

Publications and presentations

228 publications, mostly in English (international, foreign and national journals, including those in Proceedings of International Conferences)
The number of other type of Conference presentations is about 25
2 book chapters (English, one with coauthor), and one book (Hung., with coauthors)

Selected publications

Papers:

1. Balandin A, Tétényi P, The Kinetics of Catalytic Dehydrogenation of Iso-propylic Alcohols in Presence of Metals of IV. Period (Russian) *Docl. Acad. Sci. USSR* **115,** 727-730 (1957) [Part of the Candidate Thesis].
2. Balandin A., Tétényi P, On the Role of d-Electrons in Catalysis (Russian) Problems of Kinetics and Catalysis vol. *10, p. 339-343 Acad.Sci. USSR Moscow 1959* [Part of the Candidate Thesis]
3. Tétényi P, On the Mechanism of Catalytic Effect on Metals and Oxides (Hungarian) *Kémiai Közlemények (Chem. Comm.)* (Budapest) **36**, 59- (1971) [Inaugural lecture on becoming corresponding member of the Hung. Acad. Sci]
4. Paál Z.,Tétényi P., A new classification of metal catalysts in skeletal reactions of hydrocarbons, *Nature* **267,** 234-235 (1977)
5. Tétényi P., The role of catalyst surface and structure of molecules in metal catalysis, *Acta Chim. Hung.* **107,** 237-262 (1981). [Inaugural lecture on becoming full member of the Hung. Acad. Sci.]
6. Hlavathy Z., Tétényi P., Adsorption of C_1-C_3 alkanes and C_2-C_3 alkenes on Pt as studied by work function changes and Auger electron spectroscopy. *Surface Science* **410**, 9-47 (1998)
7. Koltai T., Dobrovolszky M., Tétényi P., Sulfur uptake, exchange and HDS activity of $NiMoO/Al_2O_3$ catalysts, *Studies in Surface Sci. and Catalysis* **127,** 137-143 (1999) *(Proc. 2nd Symposium of Hydrotreatment and Hydrocracking Ed, B. Delmon, G.F. Froment, P. Grange Elsevier, 1999)*
8. Paal Z, Koltai T, Matusek K, Manoli JM, Potvin C, Muhler M, Wild U, Tétényi P., Sulfur uptake and exchange, HDS activity and structure of sulfided, Al2O3 supported MoOx, PdMoOx and PtMoOx catalysts, *Phys.l Chem.Chem. Phys.* **3,** 1535-1543 (2001)
9. Massoth FE, Koltai T, Tétényi P., Theoretical analysis of sulfur exchange experiments, Journal of Catalysis. **203** 33-40 (2001**)**
10. Tétényi P., Galsan V, On the kinetics of the catalytic thiophene hydrodesulfurization in pulse system, *Reaction Kinetics and Catal. Lett.,* **78**, 299-308 (2003)
11. Tétényi P., Koltai T., Catalyst selectivity in thiophene hydrodesulfurization: Effect of H_2S and aging, *React.Kinet. Catal.Lett.,* **82,** 371-379 **(**2004).
12. Tétényi P., Ollár T., Schay Z., Schnörch P., Szarvas T., Sulfur uptake determination on Ni containing molybdena-alumina samples by radioisotope tracer technique, *Appl. Rad. and Isotopes,* **66**, 1190-1195 (2008)
13. Tétényi P., Schnörch P., Tellinger O., Promoter effect of nickel in thiophene hydrodesulfurization as monitored by sulfur uptake and cyclohexane conversion, *React. Kinet. Catal. Lett.* **97**, 141-150 (2009)
14. Tétényi P., Ollár T., Schay Z., Szarvas T., Tellinger O.:Nikkel-molibdén-oxid katalizátorok kénfelvétele és hidrodeszulfuráló aktivitásuk, (Sulfur uptake and hydrodesulfurization activity of nickel promoted molibdena-alumina catalysts. Hung. With a Summary in English) *Magyar Kémiai Folyóirat,* **115**, 134-139 (2009)
15. Tétényi P., Tellinger O., Interaction affinity of nickel promoted molybdena alumina with C, H and S in some catalytic conversions, *Reaction Kinetics, Mechanism and Catalysis*, **99**, 99-109 (2010)

Books, book chapters:

1. Tétényi P., Guczi L., Paál Z., Babernics L.: Fémekkel katalizált szénhidrogén reakciók *(Hydrocarbon reactions catalized by metals)*. *A kémia újabb eredményei* **15. k***.* 306 o*.* MTA Kiadó, Budapest 1974.
2. Tétényi Pál, Use of ^{35}S Radiotracer in Catalytic Studies. Isotopes in Heterogenous Catalysis*Catalytic Science Series* **Vol. 4***.* 63-95.(2006)
3. Paál Z, Tétényi P, Reactions of Hydrocarbons on Metallic Catalysts. in „Catalysis" *Specialist Periodical Reports* (Eds. Bond, G. C., Webb, G.) The Royal Society of Chemistry, London, 1982, **Vol. 5**. 80-126.

Annexes

Biography