Environmental Catalysis
Catalyst Synthesis & Characterization
Real-Time Tracking of Airborne & Liquid Pollutants
Advanced In-situ Spectroscopic Methods for Contamination Abatement

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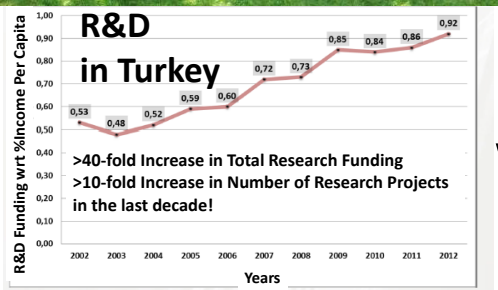
Ozensoy Research Group:

- **Biggest Environmental Catalysis Research Group** in Turkey
- **17 Group Members**: 2 Postdocs, 10 PhDs & 6 Undergrads
- Research Group **Instrument Infrastructure** Worth **> $ 3M**
- On Campus access: **National Nanotech Center >$100M**

Research Expertise:

- **Emission Control Catalysts** (**Catalytic Converters**)
- **Abatement of NO_x, SO_x, VOC** originating from **Mobile & Stationary Sources + CO/CO_2 Capture**
- **PVD Thin films for Glass Applications**
- **Water & Air Purification by Photocatalysis**
- **Photocatalytic Construction Materials for Smart Buildings**
- **Advanced Real-time In-situ Spectroscopic Techniques** for Elucidating Environmental **Catalytic Mechanisms**
- **Nanomaterial Synthesis**
- **Material/Catalyst Characterization at** the **«atomic scale»**



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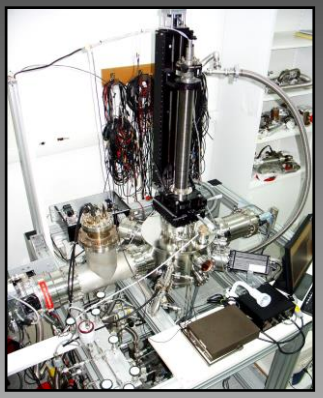

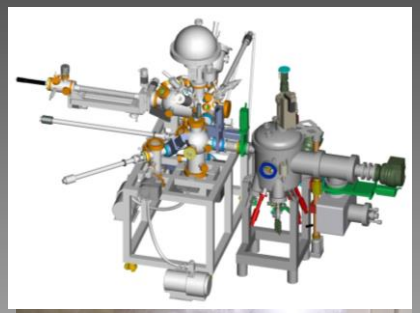

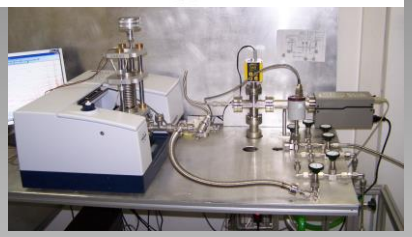

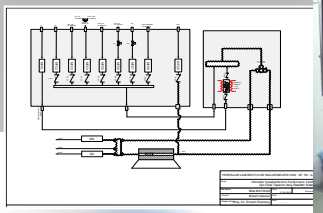

NanoMaterial Characterization and Pollution Control Techniques:

- **In-situ FTR, TPD/RGA, XPS, UV-Vis, Raman, IRAS, GC, AAS, ChemLum, BET, XRD, TGA, DSC, AFM, SEM, EDX, HR-TEM, EELS, LEED, Nano/MicroHardness, Pin on Disc, Contact Angle, Catalytic/Photocatalytic Flow Reactors**

Ozensoy Group Research Activities:

- **40 Papers** on Environmental Catalysis & Materials
- **6 International Research Projects:** ETH Zurich (CH), Baylor Univ (US), Chalmers Univ. (SWE), NCSR Demokritos (GRE), Boreskov Institute (RUS), CNR-ISMN (ITA).
- **3 Industrial Projects:** **General Motors Company (US),** General Electric (US+TR), Roketsan (TR)
- **2 Patent Applications** (**Smart Building Materials**)
- **2 Journal Scientific Advisory Board Membership**: **Catalysis Letters & Topics in Catalysis**

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