

# Curriculum Vitae

Tarek Y. Elrasasi was born in Egypt, 1975. He got his Ph.D in Shape Memory Alloys (smart material) from Department of Solid State Physics, Debrecen University, Hungary, 2012. His M.Sc was in wood-polymer composite, from Faculty of Science, Benha University 2003. His B.Sc in Physics is from Faculty of Science, Benha University 1997.

His recent research interests are: shape memory alloys; shape memory polymers; phase transformations; mechanical and thermal properties of the alloys; mechanical and physical properties of polymers; Smart materials and Nanotechnology. He has 8 publications and book chapter in shape memory alloys.



**Tarek Y. Elrasasi**

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## **1. Personal Information**

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- **Name** : Tarek Yousif Elrasasi
- **Date of Birth** : 11 Feb. 1975
- **Marital Status** : Married (+3 children)
- **Nationality** : Egyptian
- **Contact** : Tel.: +2-013 324 1688  
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- **Organization** : Department of Physics, Faculty of Science, Banha University

## **2. Qualifications**

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- 2012**      **Ph.D Degree in Solid State Physics. Smart Materials**  
" Elastic and dissipative energies in phase transformations of Cu-based shape memory alloys"  
Deparment of Solid State Physics, Debrecen University, Hungary.
- 2003**      **M.Sc. Degree in Experimental Physics (Polymer composites)**  
"Physical Behavior of Egyptian Wood Fiber/Polymer Waste Composites"  
Faculty of Science, Benha University, Egypt.
- 1997**      **B.Sc. Degree in Physics.**  
Faculty of Science, Benha University, Egypt.

### 3. Scientific Research interests

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- Shape memory alloys
- Phase transformations
- Acoustic emission
- Nanotechnology and Nanoscience
- Mechanical and Thermal properties
- Polymers composites.

### 4. Recent and previous employment

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<b>April 2013:</b>	Lecturer in Faculty of Science, Benha University
<b>Dec. 2012:</b>	Assistant Lecturer in Faculty of Science, Benha University.
<b>2011-2012:</b>	Researcher in the Department of Physical Metallurgy and Metalforming, Faculty of Material Science and Engineering, Miskolc University, Hungary
<b>2008-2011:</b>	PhD student in Solid State Physics Department, Debrecen University, Hungary.
<b>2004-2008:</b>	Assistant Lecturer in Faculty of Science, Benha University.
<b>1998-2004:</b>	A Demonstrator in Faculty of Science, Benha University.

### 5. List of Publications

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- 1- D.L. Beke, **T.Y. El Rasasi**, L. Daróczy, "On the temperature and stress dependence of transformation strain in single crystalline Cu-Al-Ni shape memory alloys" **ESOMAT 2009**, 02002 (2009) DOI:10.1051/esomat/200902002 ©
- 2- **T.Y. El Rasasi**, L. Daróczy, D.L. Beke, "On the relation between the martensite start stress and the temperature in single crystalline Cu-11.5wt%Al-5.0wt%Ni shape memory alloy", **Mat. Sci. Forum** Vol. 659(2010)pp 399-404.
- 3- **T.Y. El Rasasi**, L. Daróczy, D.L. Beke, "Investigation of thermal and stress induced hysteretic curves in CuAl(11.5wt%)Ni(5.0wt%) single crystalline shape memory alloy", **Intermetallics** 81 (2010) 1137-1142.
- 4- **T.Y. El Rasasi**, L. Daróczy, D.L. Beke, "On the Chemical and Non Chemical Free Energies in the martensite transformation in Cu Al-Ni shape memory alloy" ,**ACTA PHYSICA DEBRECINA** 2010.

- 5- **T.Y. El Rasasi**, L. Daróczy, D.L. Beke "Effect of thermal and mechanical cycling on the elastic and dissipative energy in CuAl(11,6wt%)Be(0.36wt%) shape memory alloy" in press **Journal of Alloys and Compounds**, <http://dx.doi.org/10.1016/j.jallcom.2012.06.108>.
- 6- **T.Y. El Rasasi**, L. Daróczy, D.L. Beke "Calculation of Elastic Energy Contributions As The Function of The Martensite Volume Fraction In Single Crystalline Cu-11.5wt%Al-5.0wt%Ni Shape Memory Alloys" **Mat. Sci. Forum**, Vol. 729 (2013) 37-42.
- 7- D.L. Beke, L. Daróczy, **T.Y. El Rasasi**, "Determination of the elastic and dissipative energy contributions to the martensitic phase transformation in shape memory alloys" accepted as a chapter in the book "Shape memory Alloy" book editor **F.M. B. Fernandes IN TECH 2012**
- 8- **L. Daróczy, T.Y. Elrasasi,, D.L. Beke**, "Effect of partial thermal cycles on non-chemical free energy contributions in polycrystalline Cu-Al-Be shape memory" In press in **Mat. Sci. Forum**. **738-739 (2013) pp 38-45**

## 6. Citations

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- 1- Fischlschweiger, M., Oberaigner, E.R. "Kinetics and rates of martensitic phase transformation based on statistical physics", **Computational Materials Science** 52 (1), pp. 189-192.
- 2- Oberaigner, E.R., Fischlschweiger, M. "A statistical mechanics approach describing martensitic phase transformation" **Mechanics of Materials** 43 (9) , pp. 467-475.

## 7. Activities

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1. Poster in the ESOMAT, Prague 2009,  
"On the temperature and stress dependence of transformation strain in single crystalline Cu-Al-Ni shape memory alloys".  
**D.L. Beke, T.Y. El Rasasi, L. Daróczy,**
2. Poster in the VII Hungarian Conference on Material Science 2009,  
"On the relation between the martensite start stress and the temperature in single crystalline Cu-11.5wt%Al-5.0wt%Ni shape memory alloy".  
**T.Y. El Rasasi, L. Daróczy, D.L. Beke**
3. Poster and oral presentation in The 1<sup>st</sup> Egyptian Scientific workshop, Vienna 2011  
"On the Chemical and Non Chemical Free Energies in the martensite transformation in Cu Al-Ni shape memory alloy".  
**T.Y. El Rasasi, L. Daróczy, D.L. Beke**

**4. Poster in the ICOMAT 2011 Osaka, Japan 2011**

"Effect of thermal and mechanical cycling on the elastic and dissipative energy in CuAl(11,6wt%)Be(0.36wt%) shape memory alloy".

T.Y. El Rasasi, M.M. Dobróka, L. Daróczy, D.L. Beke

**5. Poster in the VIII Hungarian Conference on Materials Science 2011**

"Calculation of elastic energy contributions as the function of the martensite volume fraction in single crystalline Cu-11.5wt%Al-5.0wt%Ni shape memory alloy".

T.Y. El Rasasi, L. Daróczy, D.L. Beke

**6. Poster and oral presentation in the 2<sup>ed</sup> Egyptian Scientific workshop, Prague, 2012.**

"On the elastic and dissipative energy contributions on the phase transformations in Cu-based shape memory alloys"

T.Y. El Rasasi, L. Daróczy, D.L. Beke

**7. Poster in the ESOMAT. Saint Petersburg, Russia 2012,**

"Effect of partial thermal cycles on non-chemical free energy contributions in polycrystalline Cu-Al-Be shape memory"

L. Daróczy, T.Y. Elrasasi, D.L. Beke,

**8. Poster in the SMST. Prague 2013,**

"Statistical analysis of jerky character of DSC signals obtained from martensitic transformation in single crystalline Ni<sub>2</sub>MnGa"

T.Y. Elrasasi, L. Daróczy, L. Z. Tóth and D.L. Beke

## **8. Participations**

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**1. International Workshop "Diffusion, Solid State Reactions and Phase Transformations on Nanoscale"**

26 - 29 September, 2012, Eger, Hungary.

**2. Workshop in "Advanced topics in nanotechnology"**

16-25 June 2012, Debrecen, Hungary.

**3. World science forum,**

16 - 19 Nov. 2011, Budapest, Hungary.

**4. International Workshop "Diffusion and Solid State Reactions on Nanoscale"**

29 Sept. - 1 Oct. 2011, Debrecen, Hungary.

## 9. Teaching

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5. Experimental physics for first, second and third year
6. General physics for first year
7. Modern Physics
8. Biophysics for second year
9. Solid state physics

## 10. Languages

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10. Arabic – Mother tongue
11. English – Very Good.
12. French – Fair
13. Hungarian – Fair

## 11. Computer skills

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- ECDL from The Higher council of universities.
- E-learning From Microsoft.
- Adobe Photoshop from Microsoft.
- Database Developer from Oracle.

## 12. References

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- **Prof. Mabrouk Kamel El Mansy.**  
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- **Prof. Mervat El-shaarawy**  
Physics Department, Faculty of Science, Benha University, Benha, Egypt  
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- **Prof. Beke Dezs .**  
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