



RETRACTION NOTE

# Retraction Note: The effects of curing medium on flexural strength and water permeability of concrete incorporating TiO<sub>2</sub> nanoparticles

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## Retraction note to:

**Materials and Structures (2021)**

<https://doi.org/10.1617/s11527-010-9664-y>

The Editor-in-Chief has retracted this Article.

After investigation, it has been found that Figures 2 and 3 show overlap with Figures 1 and 2 (respectively) of a previously published article by different authors [1].

Additionally, it has been found that some of the figures and tables have been reproduced in other, later-dated publications, and in some cases are identified in those publications as representing materials different from those described in the paper of concern. Specifically:

Table 1 showing the chemical and physical properties of Portland Cement has been duplicated in later publications [2–4] (among others) with no reference to this article;

Figures 2 and 3 appear identical to those published in [5, 6];

Figure 2 has similarities with Figure 2 in [3] when rotated, despite representing different nanoparticles;

Figure 7a has similarities with Figure 8(2)a of [7] and Figure 3a of [8]; and Table 7 has been partially reproduced in Table 6 of [9] without any cross-reference.

For these reasons, the Editor-in-Chief no longer considers the data underlying the article to be reliable.

Ali Nazari has not responded to any correspondence from the Publisher about this retraction.

## References

1. Jo BW, Kim CH, Tae GH, Park JB (2007) Characteristics of cement mortar with nano-SiO<sub>2</sub> particles. *Constr Build Mater* 21(6):1351–1355. <https://doi.org/10.1016/j.conbuildmat.2005.12.020>
2. Nazari A, Riahi S (2013) RETRACTED ARTICLE: The effects of ZrO<sub>2</sub> nanoparticles on strength assessments and water permeability of concrete in different curing media. *J Exp Nanosci* 8(4):413–433
3. Riahi S, Nazari A (2011) RETRACTED: Physical, mechanical and thermal properties of concrete in different curing media containing ZnO<sub>2</sub> nanoparticles. *Energy and Buildings* 43(8):1977–1984
4. Nazari A, Riahi S (2012) SiO<sub>2</sub> nanoparticles' effects on properties of concrete using ground granulated blast furnace slag as binder. *Mag Concr Res* 64(4):295–306
5. Nazari A, Riahi S (2010) The effect of TiO<sub>2</sub> nanoparticles on water permeability and thermal and mechanical properties of high strength self-compacting concrete. *Mater Sci Eng A* 528(2):756–763
6. Nazari A, Riahi S (2011) RETRACTED: TiO<sub>2</sub> nanoparticles effects on physical, thermal and mechanical properties of self

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The original article can be found online at <https://doi.org/10.1617/s11527-010-9664-y>.

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- compacting concrete with ground granulated blast furnace slag as binder. *Energy and Buildings* 43(4):995–1002
7. Nazari A, Riahi S (2011) **RETRACTED**: Abrasion resistance of concrete containing SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> nanoparticles in different curing media. *Energy Build.* 43(10):2939–2946
  8. Rafeipour MH, Nazari A, Mohandesi MA, Khalaj G (2012) Improvement compressive strength of cementitious composites in different curing media by incorporating ZrO<sub>2</sub> nanoparticles. *Mater Res* 15(2):177–184
  9. Nazari A, Riahi S (2011) **RETRACTED**: The effects of TiO<sub>2</sub> nanoparticles on properties of binary blended concrete. *J Compos Mater* 45(11):1181–1188

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