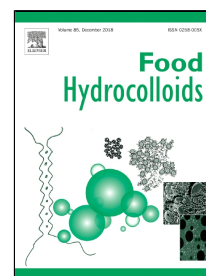


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Improvement of Fish Protein Films Properties for Food Packaging through Glow Discharge Plasma Application

Viviane Patrícia Romani, Bradley Olsen, Magno Pinto Collares, Juan Rodrigo Meireles Oliveira, Carlos Prentice-Hernández, Vilásia Guimarães Martins



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1 **Improvement of Fish Protein Films Properties for Food Packaging through Glow**
2 **Discharge Plasma Application**

3

4 Viviane Patrícia Romani^a, Bradley Olsen^b, Magno Pinto Collares^c, Juan Rodrigo
5 Meireles Oliveira^c, Carlos Prentice-Hernández^a, Vilásia Guimarães Martins^a

6

7 ^a School of Chemistry and Food, Federal University of Rio Grande, Rio Grande, Rio
8 Grande do Sul 96203-900, Brazil

9 ^b Department of Chemical Engineering, Massachusetts Institute of Technology,
10 Cambridge, Massachusetts 02139, United States

11 ^c Institute of Mathematics, Statistics and Physics – Plasma Laboratory, Federal
12 University of Rio Grande, Rio Grande, Rio Grande do Sul 96203-900, Brazil

13

14 **ABSTRACT**

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16 Myofibrillar proteins have good film forming ability, that leads to the formation of
17 polymers with interesting properties for food packaging development. However, as other
18 bio-sourced macromolecules, they have limited performance compared to synthetic
19 materials and cold plasma represents a promising strategy to change polymer properties.
20 Alternating current (AC) glow discharge plasma is a novel and innovative approach for
21 surface modification of agro-based films in order to improve their properties. Then, the
22 effects of exposure to AC glow discharge plasma were studied on the physicochemical,
23 microstructural and thermal properties of myofibrillar protein films from fish. Films
24 treated for 2 min showed increased elongation at break and decreased tensile strength,
25 while the opposite behavior was observed after 5 min of treatment. Solubility in water

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