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昆虫翼拍动中受载变形的粘弹性本构模型

鲍麟[1]，胡劲松[2]，余永亮[1]，程鹏[2]，续伯钦[2]，童秉纲[1]

1.中国科学院研究生院 生物运动力学实验室，北京 100049；
2.中国科学技术大学 力学和机械工程系，合肥 230027

摘要：昆虫翼拍动受载时发生被动变形，被看作为有助于改善飞行性能的机制之一．决定这种被动变形大小的一个关键因素是昆虫翼的材料本构关系，至今缺乏研究．基于蜻蜓翼(离体)的应力松弛实验和模型翼拍动时受载变形的有限元数值分析，揭示了粘弹性本构关系是昆虫翼材料性能的合理描述，并研究了粘弹性参数对被动变形的影响．

关键词：本构关系；粘弹性；应力松弛；有限元；昆虫翼；被动变形
中图分类号：O345；Q66

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作者简介：
鲍麟(1979—),男,江苏徐州人,在读博士生(Tel:+86-10-88256133;E-mail:l.bao@263.net)； 童秉纲(联系人.Tel:+86-10-88256264;Fax:+86-10-88256133;E-mail:tongbg@gucas.ac.cn)

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编辑部通讯址：重庆南岸重庆交通学院90信箱 邮编：400074 电话：(023)68813708 传真：(023)62652450 E-mail：applmathmech@cquc.edu.cn